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Fee: £0

1. Your reference — PADL/~~40244~~ 40303

2. Patent application number *(The Patent Office will fill in this part)* — **9901807.9**

3. Full name, address and postcode of the or of each applicant *(underline all surnames)*

British Broadcasting Corporation
Broadcasting House
Langham Place
London
W1A 1AA

Patents ADP number *(if you know it)*

If the applicant is a corporate body, give the country/state of incorporation — United Kingdom 3495550001

4. Title of the invention

BROADCAST MEDIA METADATA STRUCTURE

5. Full name, address and postcode in the United Kingdom to which all correspondence relating to this form and translation should be sent

Reddie & Grose
16 Theobalds Road
LONDON
WC1X 8PL

Patents ADP number *(if you know it)* — 91001 ✓

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and *(if you know it)* the or each application number

Country	Priority application *(If you know it)*	Date of filing *(day/month/year)*

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application	Date of filing *(day/month/year)*

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? *(Answer 'Yes' if:*

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See note (d))

YES

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Continuation sheets of this form	
Description	29
Claim(s)	8
Abstract	1
Drawing(s)	~~29~~ 28 + 28

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Priority documents	
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Statement of inventorship and right to grant of a patent *(Patents Form 7/77)*	
Request for preliminary examination and search *(Patents Form 9/77)*	1
Request for substantive examination *(Patents Form 10/77)*	
Any other documents *(please specify)*	

11. I/We request the grant of a patent on the basis of this application.

Signature: Peddie Shaw

Date: 27 January 1999

12. Name and daytime telephone number of person to contact in the United Kingdom

P A D LLOYD
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BROADCAST MEDIA METADATA STRUCTURE

FIELD OF THE INVENTION

This invention relates to methods and systems for exchange of metadata, or data about data, between systems. It is particularly, but not exclusively, concerned with the exchange of metadata defining a media material or item within the context of media production and distribution.

BACKGROUND TO THE INVENTION

The changes brought about in the broadcasting industry by the move to digital technology in all aspects of media production and distribution has exposed significant shortcomings in traditional and existing methods and systems.

The proliferation of distribution channels, using both push and pull technologies, has led to an increased demand for media content which cannot be serviced economically through original production alone but relies heavily on re-use. Information is the key to un-locking the re-use value of material, yet the industry has no agreed approach to generating and structuring this crucial data, or metadata, to enable efficient exchange of material between process stages or business parties.

The move away from analogue or physical media capture and storage formats towards digital video, audio, text, stills, graphics and software has created new problems in terms of identifying and managing materials and tracking copyright intellectual properties across multiple incompatible and non-interoperating formats and systems. A video tape, in a box with a label, is a physical object which is managed through well-understood logistical methods. When the video information is transferred as digits into an Information Technology repository such as a server, it cannot be

distinguished from any other data, whether media or business data.

Such data is not self-identifying; it requires additional metadata to give it meaning, context and value, and that information must be available at any stage during the media production and distribution lifecycle. The lack of common description and management protocols in computer-based systems and among users in the Media domain has already led to loss of material, errors in retrieval and distribution, and accidental copyright infringement.

The emerging capability of digital media formats to support embedded metadata offers an opportunity to attach business information to the audio or video for example, but if there are no standards for generation and exchange of metadata, serious inefficiencies will proliferate and solutions will be hard to find. In addition, early industry thinking about metadata development reflected a view that <u>all</u> metadata might have to be encoded on <u>every</u> section of media however small, such as a video frame or equivalent increment. Thus the business and technical metadata volumes could easily dwarf the media item, making huge demands on storage and slowing down access time, making metadata systems unviable.

At a time when information accuracy and accessibility, and business agility are increasingly vital for the media industry, the new converging technologies are causing fragmentation, data loss, and over-loading on labour-intensive human "fixes". This chaos is exacerbated by the proprietary approaches taken by individual equipment vendors, all with different systems supporting only partial solutions.

Although there are some industrial initiatives underway to stimulate a more open approach, what has been lacking to date has been an overall understanding of the requirements.

The starting point must be an architectural framework which defines the way in which all the information needed to support media production and distribution in the digital domain (while not excluding analogue technology) can be effectively structured and exchanges between process stages and business parties, and linked the with media to which it relates. Inter-operable systems can then be built to support that architecture, and metadata can be managed efficiently in terms of storage and transfer.

SUMMARY OF THE INVENTION

The invention, therefore, aims to provide such an architecture. According to the invention there is provided a method for defining a metadata structure relating to media materials the method comprising the steps of: defining a plurality of stores for metadata related to the media material, the stores being arranged into storage levels and each store having a plurality of storage elements; storing metadata relating to a given storage level in one of a plurality of storage elements of the store at that storage level, each storage element representing an attribute or characteristic of the media material; wherein the storage levels are hierarchical and the storage elements at each level above the lowest storage level comprises the stores of the immediately lower storage level.

The invention further provides a data structure for defining broadcast media materials metadata comprising: a plurality of stores for metadata related to the media material, the stores being arranged in storage levels and each store comprising a plurality of storage elements each for storing metadata relating to a given storage level, each storage element representing an attribute or characteristic of the media material; wherein the storage levels are hierarchical and the storage element at each level above the lowest storage level comprises the stores of the immediately lower storage level.

The invention still further provides a data structure for defining broadcast media material metadata comprising: a plurality of stores for metadata related to the media material, the stores being arranged at storage levels and each store comprising a plurality of storage elements each holding metadata relating to a given storage level, each storage element representing an attribute or characteristic of the media material; a plurality of levels of business stores each comprising business elements storing business metadata, the business stores being linked to the metadata stores at a storage level dependent on the business element metadata, one of the plurality of levels of business stores comprising a rights level and containing business metadata-identifying legal rights attached to the media material, the business metadata including the legal jurisdiction of the right, the geographical territory of the right, the duration of the right and the owner of the right; wherein the metadata storage levels are hierarchical and the metadata stored in the storage elements of the store at each level above the lowest storage level comprises the metadata stores of the immediately lower storage level.

The invention still further provides a data structure for defining broadcast media material metadata comprising: a plurality of stores for metadata related to the media material, the stores being arranged at storage levels and each store comprising a plurality of storage elements each holding metadata relating to a given storage level, each storage element representing an attribute or characteristic of the media material; a plurality of levels of business stores each comprising business elements storing business metadata, the business stores being linked to the metadata stores at a storage level dependent on the business element metadata, one of the plurality of levels of business stores comprising a rights level and containing business metadata identifying legal rights attached to the media material, the business metadata including the legal jurisdiction of the

right, the geographical territory of the right, the duration of the right and the owner of the right; wherein the metadata storage levels are hierarchical and the metadata stored in the storage elements of the store at each level above the lowest storage level comprises the metadata stores of the immediately lower storage level.

The invention still further provides a data structure for defining broadcast media material metadata comprising: a plurality of stores for metadata related to the media material, the stores being arranged at storage levels and each store comprising a plurality of storage elements each holding metadata relating to a given storage level, each storage element representing an attribute or characteristic of the media material; a rights store linked to at least one of the metadata stores and containing business metadata identifying legal rights attached to the media material, the business metadata including the legal jurisdiction of the right, the geographical territory of the right, the duration of the right and the owner of the right; wherein the metadata storage levels are hierarchical and the metadata stored in the storage elements of the store at each level above the lowest storage level comprises the metadata stores of the immediately lower storage level.

Embodiments of the invention have the advantage that metadata related to a media item can be stored in a manner which minimises storage space and minimises retrieval time. A metadata item for a media item need only be stored once and is retrievable at any point in the broadcast media chain. Furthermore, embodiments of the invention allow media exchange formats to be defined which embed certain metadata in the media object, for example into a video frame from where they can be accessed at any point in the broadcast chain.

BRIEF DESCRIPTION OF DRAWINGS

Embodiments of the invention will now be described by way of example, and with reference to the accompanying drawings, in which:

Figure 1 is an entity relationship diagram embodying the invention;

Figure 2 is an overall data diagram illustrating broadcast content creation and distribution;

Figure 3 shows in more detail the CREATE TV/RADIO PROGRAMME process box of figure 2;

Figure 4 shows in more detail the GATHER NEWS process box of figure 2;

Figure 5 shows the RESEARCH EVENT process of figure 4 in more detail;

Figure 6 shows ALLOCATE RESOURCES process of figure 4 in more detail;

Figure 7 shows the CREATE NEWS PROGRAMMES process of figure 2 in more detail;

Figure 8 shows the SELECT PROGRAMME CONTENT process of figure 7 in more detail;

Figure 9 shows the RESEARCH AND CAPTURE process of figure 7 in more detail;

Figure 10 shows the COMMISSION OUTPUT process in more detail;

Figure 11 shows the EVALUATE and SELECT OFFERS process in figure 10 in more detail;

Figure 12 shows the DEVISE OUTLINE SCHEDULE process of figure 10 in more detail;

Figure 13 shows the ACQUIRE PROGRAMME/EVENT RIGHT process of figure 2 in more detail;

Figure 14 shows the SCHEDULE & PROMOTE process of figure 2 in more detail;

Figure 15 shows the CREATE TRANSMISSION SCHEDULE process of figure 14 in more detail;

Figure 16 shows the PLAN & INITIATE ON-AIR PUBLICITY process of figure 14 in more detail;

Figure 17 shows the PLAY-OUT AND TRANSMIT process of figure 2 in more detail;

Figure 18 shows the PERFORM PLAY-OUT process of figure 17 in more detail;

Figure 19 shows the MANAGE MATERIAL STORE and ARCHIVE process of figure 2 in more detail;

Figure 20 shows the MANAGE INCOMING MATERIAL process of figure 19 in more detail;

Figure 21 shows the RETRIEVE MATERIAL process of figure 19 in more detail;

Figure 22 shows the MANAGE RIGHTS AGENCY process of figure 2 in more detail;

Figure 23 shows the PLAN OUTPUT process of figure 2 in more detail;

Figure 24 shows the UNDERSTAND AUDIENCE & COMPETITORS process of figure 2 in more detail;

Figure 25 shows the MANAGE RESEARCH STATISTICS process of figure 24 in more detail;

Figure 26 shows the HANDLE AUDIENCE FEEDBACK process of figure 24 in more detail;

Figure 27 shows the DEAL WITH AUDIENCE FEEDBACK process of figure 24 in more detail; and

Figure 28 shows the PROVIDE RESOURCES TO PROGRAMMES process of figure 2 in more detail.

DESCRIPTION OF BEST MODE

The entity relationship diagram of figure 1 shows how a media material item such as a television programme may be described as an interrelated series of entities. The term media material includes any logical whole piece of media for distribution. It may, for example, be a news item, a number of frames of video, a series of data or software or audio. In figure 1, the central entity is the PROGRAMME 10. An entity is a logical grouping of data and also represents information to be stored, retrieved and used. This data is all programme metadata as it describes a characteristic or attribute of the programme. The entity contains a number of data items. Thus, the PROGRAMME entity 10 holds both key and non-key data. The key data for the PROGRAMME entity is the Programme number PK1 which is a unique identifier. The tag PK1 stands for primary key. For data to be allocated a primary key it should be unique or unique when taken with another data item. The primary key is the "way-in" to the information contained within the entity. It can be seen from figure 1 that the majority of entities contain key data. Key data is essential and those entities, for example, PROGRAMME STAFF entity 38 which appear to hold only non-key data also

include key data which is not shown. An entity might only hold key data.

The RIGHTS entity 45 is an example of an entity which holds key metadata which is both unique in it's own right and metadata which is unique with another metadata item. Thus, the Right-ID data item PK2 and the Programme number data item PK3 are both unique in their own right. However, the Contract Number PK1, and the contributor-ID PK1 are only considered unique when combined together.

In PROGRAMME entity 10, the non-key data is a mixture of technical and non-technical data such as the programme title, the picture aspect ratio, the programme format, creation date, synopsis etc.

The PROGRAMME entity is linked to a number of other entities. As the programme is the end product of the creation process, it follows that the vast majority of the other entities will, in some way, be linked to the PROGRAMME entity 10.

The link between entities is a relationship, with the link line showing how the data is related. At the end of the relationship line is a symbol indicating the number of times that the entity occurs relevant to the original. There is an infinite number of ways in which the relationship between the entities can be described, for example, terms such as one, many, more than one, 2-6 can be used.

In the example of figure 1, the PROGRAMME entity is linked to a number of other entities such as the ITEM entity 12, the relationship being that the PROGRAMME contains a number of items. The PROGRAMME is linked to the entity TRANSMISSION 14, the relationship being simply "is related to". The PROGRAMME entity 10 is linked to the RESOURCE entity 16 by the relationship "uses". It can be seen from figure 1 that

a wide variety of terms are used to describe relationships between entities and the terms vary from the very specific, such as 'is made up of' to the more vague, such as 'has associated'.

In figure 1, the PROGRAMME entity 10 has relationships with other entities as listed below in table 1.

ENTITY	REFERENCE	RELATIONSHIP
ITEM	12	Contains a number of
TRANSMISSION	14	is related to
RESOURCES	16	uses
PROMOTIONAL MATERIAL	18	provides
PROGRAMME TYPE	20	describes
PROGRAMME CLASSIFICATION	21	describes
CONTRACT	22	has associated
GENRE	24	is described by
SLOT	26	requires
AUDIENCE/COMPETITOR INFO	28	has
OUTLET	30	
PLAN	32	follows
SERIES	34	contains
PRODUCTION BODY	36	is produced by
PROGRAMME STAFF	38	retains
PROGRAMME PAPERWORK	40	must produce
CONTRIBUTOR	42	contains
AUDIT TRAIL	44	

Table 1

Many of the entities having relationships with the PROGRAMME entity 10 in turn have relationships with other entities some of which may have relationships with the PROGRAMME entity. Thus, the ITEM entity has the relationship "is made up of" with a MEDIA OBJECT entity 46, the relationship "may be covered by" with the entity STORY 48 and the relationship "associated" with the CONTRACT entity 22. The latter entity also has a relationship with the PROGRAMME entity 10.

In turn the MEDIA OBJECT entity 46 has the relationship "is made up of" with a SHOT entity 50, an AUDIO CLIP entity 52, a TEXT entity 54, a GRAPHIC entity 55 and a STILL entity 56. Further, it has the relationship "may use" with a LOCATION entity 58; "is described by" with a SUBJECT INDEX entity and "needs" with the PRODUCTION BODY entity 36 which also has a relationship with the PROGRAMME entity 10.

It can be seen, therefore, that the entity relationship diagram of figure 1 provides a hierarchical breakdown of programme content through logical items which point to individual media objects. The structure also allows optimal storage of information by linking information to objects at the correct level. Thus, rights, incorporating contributor rights and/or exploitation rights are linked to programmes and at lower levels. Thus it can be seen that not all programme metadata need be stored at a very low level, such as on a video frame, as has previously been proposed. By grouping the lowest levels of metadata into entities, those entities can in turn be grouped together at a higher level to form further entities which in turn can be grouped at a still higher level and so on. In figure 1 there are a number of such hierarchies, these hierarchies are mutually consistent. One example is the SCHEDULE entity which is an overall plan for the broadcasting of programmes. This is made up of a number of slots represented by the SLOT entity 26 which in turn is made up of a number of programmes represented by the PROGRAMME entity. The PROGRAMME entity

may be thought of as referring to content. The programme entity itself is made up of a number of items represented by the ITEM entity 12.

The ITEM entity is made up of a number of media objects which represent the physical make up of the item. These are represented by the MEDIA OBJECT entity 46. The media object is comprised of only one of a number of different elements such as shots, audio clip, text, graphics and stills. Thus, a given media object only comprises shots, or stills etc. Each of these are represented by their own entity. In turn the shot may be subdivided into individual frames or smallest editable increment as can the audio clip, depending on the coding format. These may regarded as the lowest level of the hierarchy. Stored at each level is metadata relating to the media object at that level. Thus the FRAME entity has Frame-id data and the PROGRAMME entity has Programme-id. It can be seen that the each of these entities represents a storage element. The storage element stores data related to the media item at that level. These storage elements can then be combined upwards in a hierarchical structure with the data stored at each level being appropriate to that level. Thus a given piece of metadata only need to be stored once throughout the whole broadcast chain from commissioning of a programme to transmission and exploitation.

In the digital environment, business and technical data become indistinguishable. It is an advantage of the embodiment that business information can be linked to the appropriate level entity. This again reduces the amount of storage required and avoids the need for business information to be embedded in the individual video or audio frames. One example of this is the audit trail entity 44 which is linked to the PROGRAMME and ITEM entities 10, 12. If the previously assumed constraints were followed, this data would have been embedded at the FRAME level.

The manner in which the model handles rights is itself novel. As can be seen from figure 1, the rights entity has Right-id, Programme number, contract number and contributor-id as key data, and type, territory, jurisdiction, valid start date, valid end date, and conditions as non-key data. The conditions data item is included to provide a field for storage of additional information required to define the right over and above the jurisdiction, territory, time and person information provided for.

It can be seen from figure 1 that many of the data items present in a given entity are also present in other entities. For the Aspect Ratio item in the PROGRAMME entity 10 is also in the MEDIA OBJECT entity 46; the programme number is contained in the AUDIT TRAIL 44 and PROGRAMME 10 entities and the STEREO FLAG is in both the PROGRAMME 10 and AUDIO CLIP 52 entities. For the structure to work a data dictionary must first be defined and then the data entities and data terms. Moreover, local equivalents must also be defined as different parts of the broadcasting industry can use different terminology. The data dictionary is therefore a compendium of data items with their definitions and local synonyms and contains everything a broadcaster needs to know about a media item throughout its life cycle with flexibility to cope with specialised terminology and future developments.

Once the data dictionary has been defined the data model of figure 1 can be defined using the data dictionary terms and grouping items logically. The structure is hierarchical representing different levels of granularity through brand, series, programme, item and media objects. The entities are linked by relationships to provide a logical structuring of the items of information. Each of the metadata items in figure 1 would appear in the data dictionary. Relationships linking data elements to the programme entity provide its CV or Résumé.

An example of the metadata contained in the entity MEDIA OBJECT 46 is as follows:

KEY DATA	NON-KEY DATA
Media Identifier (PK1)	Media Name
	Media Short Description
	Media Type
	Media Creation Date
	Media Creation Time
	Media Compression Type
	Media Duration
	Media Correspondent
	Media Presentation Type
	Media Sequence No.
	Aspect Ratio
	Format
	Original Format

Examples of entries from the data dictionary for some of the entities shown in figure 1 are as follows:

- **PROGRAMME CLASSIFICATION**
  Used to describe the type of programme. Current examples include trail, ordinary scheduled programme, network ident, weather bulletin, continuity announcement, time (pips/clock).

- **PROGRAMME PAPERWORK**
  The paperwork required to complete the programme and trigger payments to contributors. Also forms a crucial record of the production process for that programme.

- **PROGRAMME TYPE**

  Programme Type is an International standard that is/has been brought in. Most commonly used in radio systems that have RDS capability. The information is embedded with the Programme. Will also cover EPG classifications.

  EXAMPLES: News, Traffic information, Pop, Classical

- **PROMOTIONAL MATERIAL**

  The material produced to market the programme across the BBC outlets. Work carried out by presentation, PR, and production team.

  EXAMPLES: Stills, trails, material for press.

- **QUOTE**

  The initial cost given to a production body for a resource or set of resources.

- **RESOURCES**

  All persons and equipment involved in the production of a programme, (excluding contributors).

- **RIGHTS**

  The individual rights that have been collected from the various contributors involved in an item or programme. The totality for an item/programme gives the broadcaster the "right" to broadcast that piece.

- **SALES HISTORY**

  The history maintained about a particular Production body
  (Customer).

- **SCHEDULE**

  A plan covering a pre-defined period of time that shows the slot for programmes and what is going to fill them.

The nearer to the date of output the firmer the schedule. Backup/contingency schedules also produced.
EXAMPLE: There are many different instances of Schedule during the process - outline, genre maps, junction, continuity, operational, transmission, as run log etc.

- **SERIES**

A group of programmes run over a pre-defined period of time. The programmes may be linked in subject matter as in a drama series or a serialisation of a book. Alternatively, they may be linked by a common editorial theme but with each programmes having a difference in subject matter, such as consumer affairs or holiday/vacation ideas. A serial can be considered a series with a prescribed sequence number.
RELATED TERMS: serial

- **SHOT**

A collection of frames makes up a shot, which is a distinct sequence from an editorial point of view. An unedited sequence of pictures.

- **SLOT**

A space of a certain length within an outlet's schedule for a programme. In an outline schedule the slot will just contain a programme but nearer to transmission the junction schedule will contain all the programme, trail, network ident, etc. included with that slot.

- **STILL**

A static picture, e.g., a photograph.

- **SUBJECT INDEX**

Also known as Keywords, used by Archivists to describe a piece of media
EXAMPLES: Location: New York, Person: Gerry Adams, Sinn Fein.

- **TEXT**
All material in text format, which is used to make up a programme. This includes scripts & schedules (and all versions thereof) as well as any graphs and/or subtitles which may appear on the screen.

- **TRANSMISSION**
The details about what is to be or what has been Transmitted.

- **USAGE**
Tracking details about a piece of media and where it is/has been used
EXAMPLES: 26/08/97 sold to CBS News, transmitted 27/08/97

To assist in understanding how the data model operates it is helpful to consider a media object such as footage of wildlife. At the media object entity level information about this footage is stored such as the media identifier, its name, creation date etc as shown in figure 1. The object is comprised of a number of shots which may have been taken by a number of different camera operators at each of a number of locations and following a series of shooting instructions. Different shots may be used in different broadcast programmes, some may be used for trails and some may not be used at all.

The audio clip used, for example in the signature tune for one of the programmes may have rights attached to it and may have been used for other programmes.

Prior to the present invention it was an assumed constraint that all the data represented by the footage would either be to store all of it for each frame of each shot or for it to be largely lost or stored in many places simultaneously. The first of these results in vast storage requirements and the second also has large storage overheads as well as being undesirable. The data model represented by figure 1 requires each metadata item to be stored only once and the hierarchical relationships between the storage objects means that all the information can be retrieved at any level. Thus at the programme level one can access all the shot information and at the shot level one can access all the programme information for which that shot has been used. Given the shot data, one can move up the hierarchy through the MEDIA OBJECT, ITEM, PROGRAMME, and TRANSMISSION entities to find out when and in what form the shot has been broadcast.

As well as showing the process as a data model, the process can be represented by data flow diagrams. Data flow diagrams consist of processes, data flows, data stores and external entities and illustrate the flow of data. In a process box, the action is linked with nouns to describe the process. The diagram does not show how many times the process is executed or with any conditions that may prevent the process from being executed. However, the process must be triggered by a data flow. A data flow carries data in a packet into and out of processes and must change into the data in some way. The data on the data flow is broken down into data structures and data items/elements which map to static data represented on the entity relationship diagram of figure 1. Data may flow to and from an external entity which is a source or recipient of data.

This might be a report or a contract. An external entity is simply external to the area represented by the data flow diagram and not necessarily to the organisation as a whole.

A data store is a temporary repository of data. Everything in it should be retrieved and used by a process somewhere and data stored should be placed there by a process. The contents of the data store map to the entity relationship diagram.

In the example described the entities may be regarded each as a store at one level of a hierarchy of storage levels for metadata relating to a media item. The entity contains data items which may be regarded as storage elements which store metadata relating to a given storage level with each storage element representing a characteristic of the media item. The metadata stored at a given storage level comprise the stores of the immediately lower level for all levels except the lowest.

Figure 2 shows the content creation and distribution data flow diagram for a broadcasting organisation. Figures 3 - 28 show data flow diagrams for each of the processes illustrated in figure 2.

Thus the content creation and distribution process is broken down into twelve processes. Each of these processes are in turn broken down into a number of sub-processes. Central to this is CREATE TV/RADIO PROGRAMME 72 which has data flows from sources 74, 76 which represent an external archive and a contributor. The data flow from the archive 74 represents information and footage. Data flows both from and to the contributor, the flow into the contributor being contractual and the flow from the contributor being availability. There is further flow of data to an external entity 77 representing billing to broadcasting data services.

The process 72 has a data flow between the process PROVIDE RESOURCES to PROGRAMMES 78, the flow from the CREATE TV/RADIO PROGRAMME process 72 representing bookings and

demand forecast and the flow to the process representing resources, equipment, studios and quotes.

The process CREATE TV/RADIO PROGRAMME 72 has data flow to the process COMMISSION OUTPUT 82 with data representing offers flowing from the CREATE TV/RADIO PROGRAMME 72 process to the commission output process and data representing commissioning brief, and offer response flowing to the CREATE TV/RADIO PROGRAMME process. Data included in production contract will flow both ways. The CREATE TV/RADIO PROGRAMME process 72 will exchange data with the PLAY-OUT and TRANSMIT process 84 with the flow of data to PLAY-OUT and TRANSMIT process 84 representing programme feed and the data flow to the CREATE TV/RADIO PROGRAMME 72 representing a confirmed transmission. The data will flow from the CREATE TV/RADIO PROGRAMME process 72 to the process SCHEDULE and PROMOTE 86. That flow represents promotional material and presentation details.

Data is exchanged between the CREATE TV/RADIO PROGRAMME 72 process and the MANAGE MATERIAL STORE & ARCHIVE process 90. The data flow from the CREATE TV/RADIO PROGRAMME process represents pre-recorded programme tape, enquiries, rushes and documents together with transmitted programmes. The flow from the archive process 90 represents information and footage. Finally, there is a flow of data from the process ACQUIRE PROGRAMME EVENT RIGHT 92 to the CREATE TV/RADIO PROGRAMME process which represents an insert of programme or broadcast right.

The CREATE TV/RADIO PROGRAMME process 72 is illustrated in more detail in figure 3.

The CREATE TV/RADIO PROGRAMME process 72 may be broken down into 6 sub-processes as follows: RESEARCH AND SUBMIT OFFER 196; PLAN PROGRAMME 198; PREPARE AND RESEARCH 200; CAPTURE

MATERIAL 202; MANIPULATE MATERIAL 204; and DELIVER PROGRAMME.

As can be seen from figure 3, these processes involve the flow of data to and from 3 stores: PROGRAMME CONTENT 207; PROGRAMME INFORMATION 210; and PRODUCTION SCHEDULE 212.

Figure 2 shows a STORE 100 which represents the programming schedule. Data flows from the SCHEDULE STORE 100 to the SCHEDULE & PROMOTE PROCESS 86 representing MASTER SCHEDULE data. MASTER SCHEDULE data also flows from the commission output process to the SCHEDULE STORE 100. Data also flows to the SCHEDULE STORE 100 from the SCHEDULE & PROMOTE process 86 representing trail details and confirmed timings and from the play-out and transmit process 84 representing actual start and finish times.

The PROVIDE RESOURCES TO PROGRAMMES process is shown in more detail in figure 28. The process is broken down into six sub-processes: PROVIDE QUOTES & TAKE BOOKINGS 212; SET UP, MONITOR AND MANAGE JOB 214; PROVIDE RESOURCES 216; MANAGE PROJECT FINANCES 218; ESTABLISH COST OF PRODUCTS AND SERVICES 220; and FORECAST DEMANDS OF PRODUCTS AND SERVICES 222.

These sub-processes draw information from and send data to three stores; SCHEDULE & COSTING INFORMATION 224, PROJECT PLAN AND DOCUMENTATION 226 and EXPERIENCE LIBRARY 226.

News within the organisation is represented by 2 processes; CREATE NEWS PROGRAMMES 88 and GATHER NEWS 94. The GATHER NEWS process receives data flow from 6 external data sources: NEWS EDITORS 96, REGIONAL NEWS 98, NEWSROOM 102, EXTERNAL NEWS PROVIDERS 104, THE PUBLIC/AGENCIES AND WIRES 106 AND EXTERNAL ARCHIVES 108. The data flow from NEWS EDITORS 96 represents guidance, from REGIONAL NEWS 98 and the NEWSROOM represents prospects and also from the NEWSROOM

availability, from the EXTERNAL NEWS PROVIDERS 104 represents knowledge of competition, from PUBLIC/AGENCIES AND WIRE 106 represents prospects and diary events and from EXTERNAL ARCHIVE represents information and footage. Data flow is also received from the MANAGE MATERIAL STORE & ARCHIVE process 90 representing information and footage. Data flows from the GATHER NEWS process 94 is to the NEWSROOM 102 representing an assignment, to the EXTERNAL ARCHIVE 108 representing an enquiry, to the MANAGE MATERIAL STORE & ARCHIVE 90 also representing an enquiry and to the CREATE NEWS PROGRAMMES process 88 representing a potential news item and an event, outline or story.

The GATHER NEWS process 94 is illustrated in more detail in figures 4-6 and comprises three sub-processes MAINTAIN DAILY PROSPECTS 110, ALLOCATE RESOURCES 112 and RESEARCH EVENT 114. The RESEARCH EVENT and ALLOCATE RESOURCES processes are illustrated in detail in figures 5 & 6.

The CREATE NEWS PROGRAMMES process 88, in addition to the data flows already described, exchanges data with the EXTERNAL ARCHIVE source 108 by way of enquiries to the archive and information and footage from the archive. Data flow to the MANAGE MATERIAL STORE & ARCHIVE process 90 represents enquiries, rushes and documents, together with pre-recorded programme tape whereas data flow from the MANAGE MATERIAL STORE & ARCHIVE process 90 represents information and footage. Data flow to the SCHEDULE AND PROMOTE process 86 represents promotional material and presentation details and data flow to the PLAY-OUT and TRANSMIT process 84 represents programme feed.

The CREATE NEWS PROGRAMME process is illustrated in more detail in figures 7-9 and comprises 4 sub-processes: SELECT PROGRAMME CONTENT 116, RESEARCH & CAPTURE 118, COMPILE PROGRAMME 120 and EDIT 122. The SELECT PROGRAMME content process is shown in more detail in figure 8 and the RESEARCH

AND CAPTURE process is shown in more detail in figure 10. The SELECT PROGRAMME CONTENT process is broken down into four sub-processes: FINALISE NEWS ITEMS 228, ALLOCATE ROUGH TIMINGS 230, ALLOCATE PRODUCTION TEAM 232 and CREATE DRAFT TREATMENT 234. These processes draw a data from a PROSPECTS store 234. The ALLOCATE PRODUCTION TEAM process also draws on available production staff data from a PRODUCTION ROTA store 236.

The COMMISSION OUTPUT process 82, as well as the data flows described with the CREATE TV/RADIO PROGRAMME process 72 receives data from a STORE 124 which represents the controllers stock of untransmitted material. Data is also received from an external entity, representing offers from EXTERNAL PRODUCTION BODIES 126. Data flows from the COMMISSION OUTPUT process to the EXTERNAL PRODUCTION BODY 126 in the form of commissioning briefs, offer responses and production contracts. A second external recipient of data is the CORPORATE CENTRE 128 which receives data relevant to actual versus planned quotas. The COMMISSION OUTPUT process 82 also receives data flow from the SCHEDULE STORE 100 and from a process PLAN OUTPUT SERVICE 130. The data from the STORE represents available slots and the data from the plan output service represents strategic output plan. Data in the form of requirements is sent to the SCHEDULE STORE 100. Data flows from the COMMISSION OUTPUT process to an UNDERSTAND AUDIENCE & COMPETITORS process 132 in the form of information requirements and flows from the UNDERSTAND AUDIENCE & COMPETITORS to the COMMISSION OUTPUT process in the form of filtered statistics.

The COMMISSION OUTPUT process is shown in more detail in figures 10-12 and comprises four processes: DEVISE OUTLINE SCHEDULE 134, EVALUATE AND SELECT OFFICERS 136, NEGOTIATE AND AWARD COMMISSION 138 and CHECK WITH QUOTA TARGETS 140.

The ACQUIRE/PROGRAMME EVENT RIGHT 92 process involves data flow between an external source representing the EVENT RIGHT HOLDER 142 with the data representing negotiation and contract and also flow of data in from EXTERNAL EVENT ORGANISERS 144 representing possible events to cover. Data flows to an EXTERNAL SOURCE 146 representing other distributors. Data representing negotiation and contract flows both ways to and from that source and data to that source represents "ancillary rights which could be sold" and from the source represents "potential acquisitions and programme and paperwork information".

The ACQUIRE PROGRAMME/EVENT RIGHT process 92 is illustrated in more detail in figure 13. The process 92 is broken down into five sub-processes: IDENTIFY ACQUISITIONS & EVENTS 238, NEGOTIATE & AGREE CONTRACT 240, SELL ANCILLARY RIGHTS 242, MAINTAIN ACQUIRED STOCK 244 AND ALLOCATE PROGRAMME TO SLOT 246. The sub-processes make use of data in the CONTROLLERS STOCK STORE 124, the SCHEDULE STORE 100 and a RIGHTS STORE 248.

The SCHEDULE AND PROMOTE process 86, in addition to the data flows already described, receives a flow of data from the UNDERSTAND AUDIENCE & COMPETITORS process representing upheld complaints regarding the content of a broadcast and sends data to the BROADCASTING DATA SERVICES SOURCE 77 representing weekly schedules and data to a recipient representing press and public relations 148 regarding off-air publicity and promotions. Data flows from the SCHEDULE AND PROMOTE process also to the UNDERSTAND AUDIENCE & COMPETITORS process representing information requirements. Data also flows to the PLAY-OUT & TRANSMIT process representing on-air publicity and promotions and schedule and continuity script. Data representing a tape list flows to the MANAGE MATERIAL STORE & ARCHIVE process 90.

The SCHEDULE AND PROMOTE process is illustrated in more detail in figures 14-16. The SCHEDULE & PROMOTE process is broken down into three sub-processes: CREATE, TRANSMISSION SCHEDULE 250, PLAN & INITIATE ON-AIR PUBLICITY 252 AND PLAN & INITIATE OFF-AIR PUBLICITY 254. Each of these processes relies on data flow to and from the SCHEDULE STORE 100. The CREATE TRANSMISSION SCHEDULE process is shown in more detail in figure 16 and the PLAN & INITIATE ON-AIR PUBLICITY process is shown in more detail in figure 16.

The PLAY-OUT AND TRANSMIT process 84, in addition to the data flows described already sends information requirements to the UNDERSTAND AUDIENCE & COMPETITORS process 132, transmitted programme data, transmission log and original documents to the MANAGE MATERIAL STORE & ARCHIVE process 90. Pre-recorded tape information is received from the MANAGE MATERIAL STORE & ARCHIVE process and completed contract information flows to a MANAGE RIGHTS AGENCY process 150. Distribution data flows to, and transmission service data flows from an External source/recipient labelled DISTRIBUTION SERVICE PROVIDER 152.

The PLAY-OUT AND TRANSMIT process is illustrated in more detail in figures 17 & 18. The PLAY-OUT & TRANSMIT process comprises 4 sub-processes: PERFORM PLAY-OUT 256, CAPTURE ACTUAL TRANSMISSION DETAILS 258, INITIATE POST-TRANSMISSION RIGHTS PAYMENT 260 and PERFORM PROMOS ANALYSIS 262. These processes draw on data from the SCHEDULE 100 and from a store of research statistics 264. The PERFORM PLAY-OUT sub-process is shown in more detail in figure 18.

The MANAGE MATERIAL STORE & ARCHIVE process 90, in addition to the data flows described already receives a data flow from the UNDERSTAND AUDIENCE & COMPETITORS process 132 in the form of request for tapes and sends data to that process in the form of pre-recorded programme tapes. Data flow from two external sources, EXTERNAL ARCHIVE 154 and ARCHIVE

STEERING GROUP 156 represent material and rights flowing from outside the Organisation and strategic direction respectively.

The MANAGE MATERIAL STORE & ARCHIVE process is illustrated in more detail in figures 19-21. The MANAGE MATERIAL STORE & ARCHIVE process may be broken down into three sub-processes as shown in figure 19. These processes are CREATE ARCHIVING POLICY 266, MANAGE INCOMING MATERIAL 268 and RETRIEVE MATERIAL 270. The latter two sub-processes draw on data in a MATERIAL STORE & ARCHIVE 272. The MANAGE INCOMING MATERIAL sub-process is shown in more detail in figure 20 and the RETRIEVE MATERIAL sub-process is shown in more detail in figure 21.

The MANAGE RIGHTS AGENCY process 150 will receive data flow representing Union & Framework Agreements from a source representing Union & Industry Bodies 156 and data will flow to a recipient representing Worldwide product Licences 158. The MANAGE RIGHTS AGENCY process is illustrated in more detail in figure 22.

The PLAN OUTPUT service process 130 receives data flows from external sources representing the chief executive broadcast 160, the Government 162 and any relevant legislation represented here by the Broadcasting Act 1990, 164. Data also flows from the UNDERSTAND AUDIENCE & COMPETITORS process in the form of filtered statistics. Data is output to the SCHEDULE 100 in the form of news slots, to the COMMISSION OUTPUT process 82 in the form of strategic output plans and to the CREATE NEWS PROGRAMMES process 88 in the form of guaranteed news output. The plan output service is illustrated in more detail in figure 23.

The UNDERSTAND AUDIENCE & COMPETITORS process gathers information from a variety of external sources such as the Government 162 in the form of broadcasting requirements, for

example under a broadcasting charter, from broadcasting industry monitoring services in the form of viewer/listener statistics, quote requests and contracts and other research results, from viewers and listeners in the form of complaints and feedback. Information flows to external sources in the form of published statistics to an annual report, reports and statistics to a given channel controller, responses to viewers and listeners and requests to statistical gathering agencies. The UNDERSTAND AUDIENCE & COMPETITORS process is illustrated in more detail in figures 24-27. The UNDERSTAND AUDIENCE & COMPETITORS process can be broken down into two sub-processes: MANAGE RESEARCH STATISTICS 274 and HANDLE AUDIENCE FEEDBACK 276. These sub-processes are shown in more detail in figures 25 & 26 respectively. Figure 26 shows that the HANDLE AUDIENCE FEEDBACK sub-process can be further sub-divided into two more sub-processes: DEAL WITH AUDIENCE FEEDBACK 278 and INVESTIGATE COMPLAINTS 280. The DEAL WITH AUDIENCE FEEDBACK sub-process is further illustrated in figure 27.

A combination of the data model of figure 1 and the data flow diagram of figure 2 can be used to develop A standard media exchange framework. This sets out the metadata items which must be present in a media item or material at each level of the entity hierarchy. Without this standardisation, the data model of figure 1 falls down. The standard media exchange framework (SMEF) can only work if the data formats are fixed.

An example of a possible exchange framework is the data which is required to be loaded into a camera prior to a shot. This requires standardisation amongst camera manufacturers. That information might include programme identification, scene, location, camera operator, shooting instructions, format. This data, which at present might only be recorded on paper and then destroyed, is captured in a format consistent with the structure of the data model

such that it can be accessed from any level. It can simply be uploaded into a central computer and is then available, for example, at the edit suite. The metadata is only stored at one location within the entire system. Rather than capturing the data at the end of a process, data is captured as it happens and is perpetuated.

The Media Exchange Architecture described enables the linking of Media objects together including content and service metadata in a way which enables extremely efficient development, re-usage and re-purposing of content in an integrated database environment. The architecture allows a standard exchange interface to be defined between processes.

The data structure described provides a unified structure of information across the whole broadcast media supply chain including commissioning, scheduling, capture, editing, play-out, archive/retrieval and exploitation. The structure takes into account multi media processes such as television, radio and Internet rather than relying on a single media type. The structure can view a programme as a single entity or as a collection of pointers directed to different media objects as components of a defined structure called a Programme Item. This is achieved due to the hierarchical nature of the relationship between the various entities. Similarly, schedules can be viewed as pointers to a set of completed programmes or interstitials. This structure allows details about media objects to be recorded efficiently at the appropriate level of granularity, including information such as construction, play-out history and versioning details. Thus, the data structure breaks down programme content through a hierarchy of logical items pointing to individual media objects (storage-related objects). This framework facilitates the addition of new media object types such as virtual reality content, inter active content etc. and provides a structure with links into consumer/audience usage information. The structure allows optimal storage of

information by linking information to objects at the right level which is crucial for the definition and management of metadata held integrally with the media or elsewhere. Systems which are compliant with this structure will be most efficient and most flexible in their storage of information.

Application of the data structure enables systems to be built which will integrate converging requirements of broadcast and media business systems. Systems which are compliant with this structure will be easier to integrate as the data exchange standard will be consistent regardless of the internal storage schemes used. Systems which are compliant in their internal storage schemes will also be optimumly efficient in their use of storage. Specific examples of systems which can be made compliant include media commissioning and scheduling systems, systems to support content production process, broadcast play-out systems, Internet websites, customer feedback capture systems, content asset management systems, intellectual property right systems and archive systems.

The data structure is typically implemented in software, for example the data dictionary may be held in a software repository using a Popkin System Architect Case Tool.

CLAIMS

1. A method for defining a metadata structure relating to media materials the method comprising the steps of:

defining a plurality of stores for metadata related to the media material, the stores being arranged into storage levels and each store having a plurality of storage elements;

storing metadata relating to a given storage level in one of a plurality of storage elements of the store at that storage level, each storage element representing an attribute or characteristic of the media material;

wherein the storage levels are hierarchical and the storage elements at each level above the lowest storage level comprises the stores of the immediately lower storage level.

2. A method according to claim 1, wherein the storage levels include a programme level and a programme item level, and the programme level storage elements relate to programme items metadata, the programme items comprising the immediately lower storage level.

3. A method according to claim 2, wherein the storage levels include a media object level and the programme items level storage elements relate to media object metadata, the media objects comprising the immediately lower storage level.

4. A method according to claim 3, wherein the storage levels include a shot level and the media object level storage elements relate to shot metadata, the shots comprising the immediately lower storage level .

5. A method according to claim 2, wherein the storage levels include a video frame level and the shot level storage elements relate to video frame metadata, the video frames comprising the immediately lower storage level.

6. A method according to claim 3, wherein the storage levels include an audio level and the media object level storage elements relate to audio metadata the audio level comprising the immediately lower storage level.

7. A method according to claim 6, wherein the storage levels include an audio frame level and the audio level metadata storage elements relate to audio frame metadata, the audio frame level comprising the immediately lower storage level.

8. A method according to claim 3, wherein the storage levels include a text level and the media object level storage elements relate to text metadata, the text level comprising the immediately lower storage level.

9. A method according to claim 3, wherein the stoage levels include a graphics level and the media object level storage elements relate to graphics metadata, the graphics level comprising the immediately lower storage level.

10. A method according to claim 3, wherein the storage levels include a stills level and the media object level storage elements relate to stills metadata, the stills level comprising the immediately lower storage level.

11. A method according to claim 1, further comprising storing a metadata dictionary, wherein the metadata is derived from the metadata dictionary.

12. A method according to Claim 11, wherein the dictionary further includes acceptable synonyms for at least some of the metadata items.

13. A method according to claim 1 further comprising defining a plurality of levels of business stores each comprising business elements each relating to business metadata, the business stores being linked to the metadata stores at a storage level dependent on the business element metadata.

14. A method according to claim 13, wherein one of the plurality of levels of business stores comprises a rights level and contains business metadata identifying legal rights attached to the media material, the business metadata including the legal jurisdiction of the right, the geographical territory of the right, the duration of the right and the owner of the right.

15. A method according to claim 1 wherein the media material is a radio, television or Internet material or associated or derived product.

16. A method according to claim 1, wherein the storage levels cover the distributed media supply chain extending from service proposition to audience consumption.

17. A method according to claim 1, comprising defining a plurality of mutually consistent hierarchies of storage levels.

18. A method of defining a standard media exchange framework comprising the steps of:

storing media material metadata according to the method of claim 1,

defining data flows between processes in a broadcast media chain; and

defining metadata items for inclusion in a format for exchange between one process in the broadcast media chain and another.

19. A data structure for defining broadcast media materials metadata comprising:

a plurality of stores for metadata related to the media material, the stores being arranged in storage levels and each store comprising a plurality of storage elements each for storing metadata relating to a given storage level, each storage element representing an attribute or characteristic of the media material;

wherein the storage levels are hierarchical and the storage element at each level above the lowest storage level comprises the stores of the immediately lower storage level.

20. A structure according to claim 19, wherein the storage levels include a programme level and a programme items level, and the programme level storage elements relate to programme items metadata, the programme items comprising the immediately lower storage level.

21. A structure according to claim 20, wherein the storage levels include a media object level and programme items level storage elements relate to media object metadata, the media objects comprising the immediately lower storage level.

22. A structure according to claim 21, wherein storage levels include a shot level and the media object level storage elements relate to shot metadata, the shots comprising the immediately lower storage level .

23. A structure according to claim 22, wherein the storage levels include a video frame level and the shot level storage elements relate to video frame metadata, the video frames comprising the immediately lower storage level.

24. A structure according to claim 21, wherein the storage levels include an audio level and the media object level storage elements relate to audio metadata the audio level comprising the immediately lower storage level.

25. A structure according to claim 24, wherein the storage levels include an audio frame level and the audio level metadata storage elements relate to audio frame metadata, the audio frame level comprising the immediately lower storage level.

26. A structure according to claim 21, wherein the storage levels include a text level and the media object level storage elements relate to text metadata, the text level comprising the immediately lower storage level.

27. A structure according to claim 21, wherein the storage levels include a graphics level and the media object level storage elements relate to graphics metadata, the graphics level comprising the immediately lower storage level.

28. A structure according to claim 21, wherein the storage levels include a stills level and the media object level storage elements relate to stills metadata, the stills level comprising the immediately lower storage level.

29. A structure according to claim 19, further comprising a metadata dictionary, wherein the metadata is derived from the metadata dictionary.

30. A structure according to Claim 29, wherein the dictionary further includes acceptable synonyms for at least some of the metadata items.

31. A structure according to claim 19 further comprising a plurality of levels of business stores each comprising business elements related to business metadata, the business

elements being linked to the metadata stores at a storage level dependent on the business element metadata.

32. A structure according to claim 31, wherein one of the plurality of levels of business elements comprises a rights level and contains business metadata identifying legal rights attached to the media material, the business metadata including the legal jurisdiction of the right, the geographical territory of the right, the duration of the right and the owner of the right.

33. A structure according to claim 19 wherein the media material is a radio, television or Internet material or associated or derived product.

34. A structure according to Claim 19, wherein the storage levels cover the broadcast media supply chain extending from service proposition to audience consumption.

35. A structure according to claim 19, a plurality of mutually consistent hierarchies of storage levels.

36. A data structure for defining broadcast media material metadata comprising:

a plurality of stores for metadata related to the media material, the stores being arranged at storage levels and each store comprising a plurality of storage elements each holding metadata relating to a given storage level, each storage element representing an attribute or characteristic of the media material;

a plurality of levels of business stores each comprising business elements storing business metadata, the business stores being linked to the metadata stores at a storage level dependent on the business element metadata, one of the plurality of levels of business stores comprising a rights level and containing business metadata-identifying legal rights attached to the media material, the business

metadata including the legal jurisdiction of the right, the geographical territory of the right, the duration of the right and the owner of the right;

wherein the metadata storage levels are hierarchical and the metadata stored in the storage elements of the store at each level above the lowest storage level comprises the metadata stores of the immediately lower storage level.

37 A data structure for defining broadcast media material metadata comprising:

a plurality of stores for metadata related to the media material, the stores being arranged at storage levels and each store comprising a plurality of storage elements each holding metadata relating to a given storage level, each storage element representing an attribute or characteristic of the media material;

a plurality of levels of business stores each comprising business elements storing business metadata, the business stores being linked to the metadata stores at a storage level dependent on the business element metadata, one of the plurality of levels of business stores comprising a rights level and containing business metadata identifying legal rights attached to the media material, the business metadata including the legal jurisdiction of the right, the geographical territory of the right, the duration of the right and the owner of the right;

wherein the metadata storage levels are hierarchical and the metadata stored in the storage elements of the store at each level above the lowest storage level comprises the metadata stores of the immediately lower storage level.

38. A data structure for defining broadcast media material metadata comprising:

a plurality of stores for metadata related to the media material, the stores being arranged at storage levels and each store comprising a plurality of storage elements each holding metadata relating to a given storage level, each

storage element representing an attribute or characteristic of the media material;

a rights store linked to at least one of the metadata stores and containing business metadata identifying legal rights attached to the media material, the business metadata including the legal jurisdiction of the right, the geographical territory of the right, the duration of the right and the owner of the right;

wherein the metadata storage levels are hierarchical and the metadata stored in the storage elements of the store at each level above the lowest storage level comprises the metadata stores of the immediately lower storage level.

ABSTRACT (Fig 1)

Broadcast Media Metadata Structure

A broadcast media metadata structure is comprised of a number of metadata stores related to the media material defined by the structure. The stores are arranged in storage levels and each store has a number of storage elements. The storage elements store metadata relating to a given storage level. The metadata relates to an attribute or characteristic of the material. The storage levels are arranged in a number of mutually consistent hierarchies with the storage level at each level above the lowest level in a given hierarchy comprising the stores of the immediately lower storage level. A number of levels of business stores each have business elements related to business metadata. The business elements are linked to the metadata stores at a storage level appropriate to the business metadata.

Content Creation and Distribution

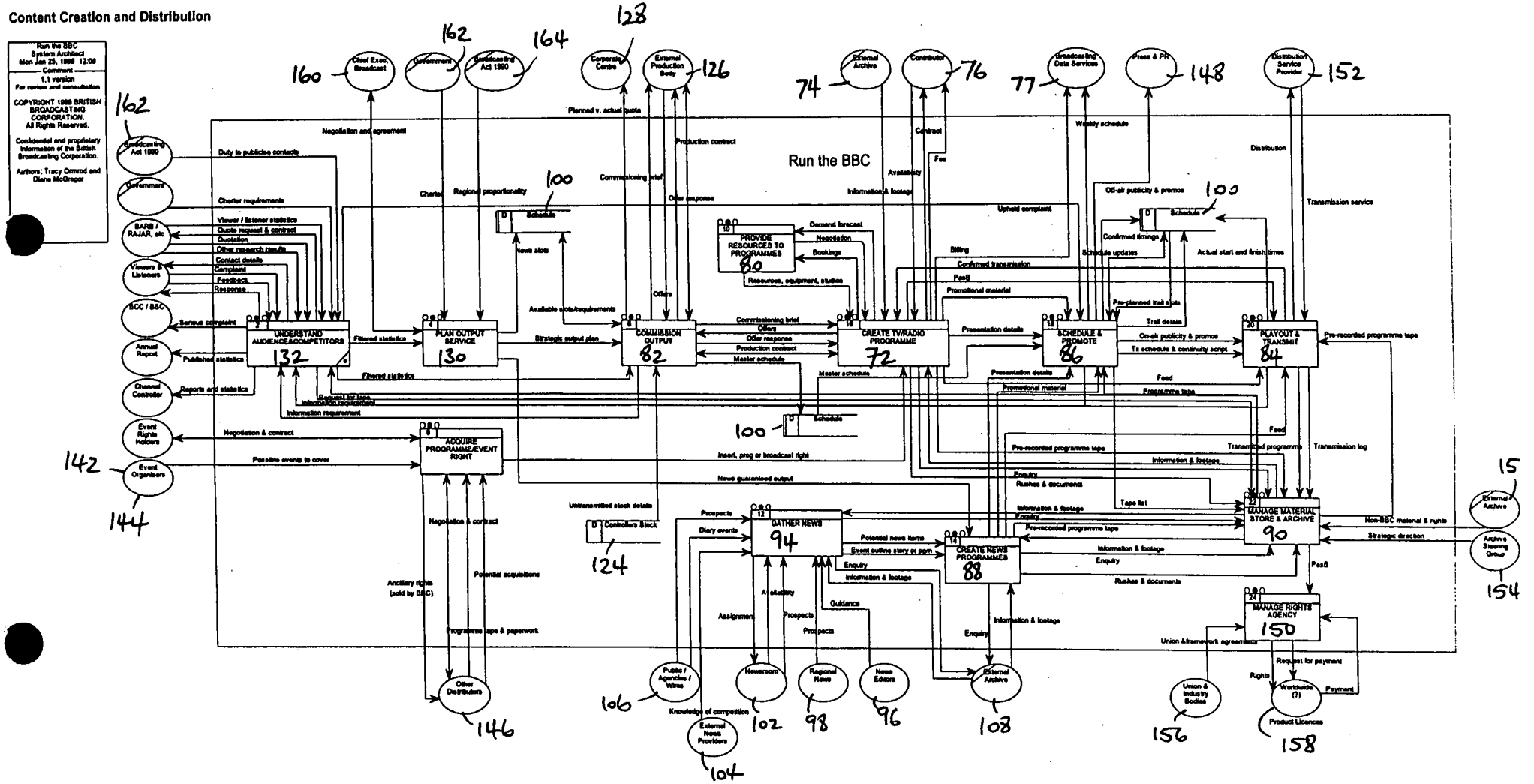
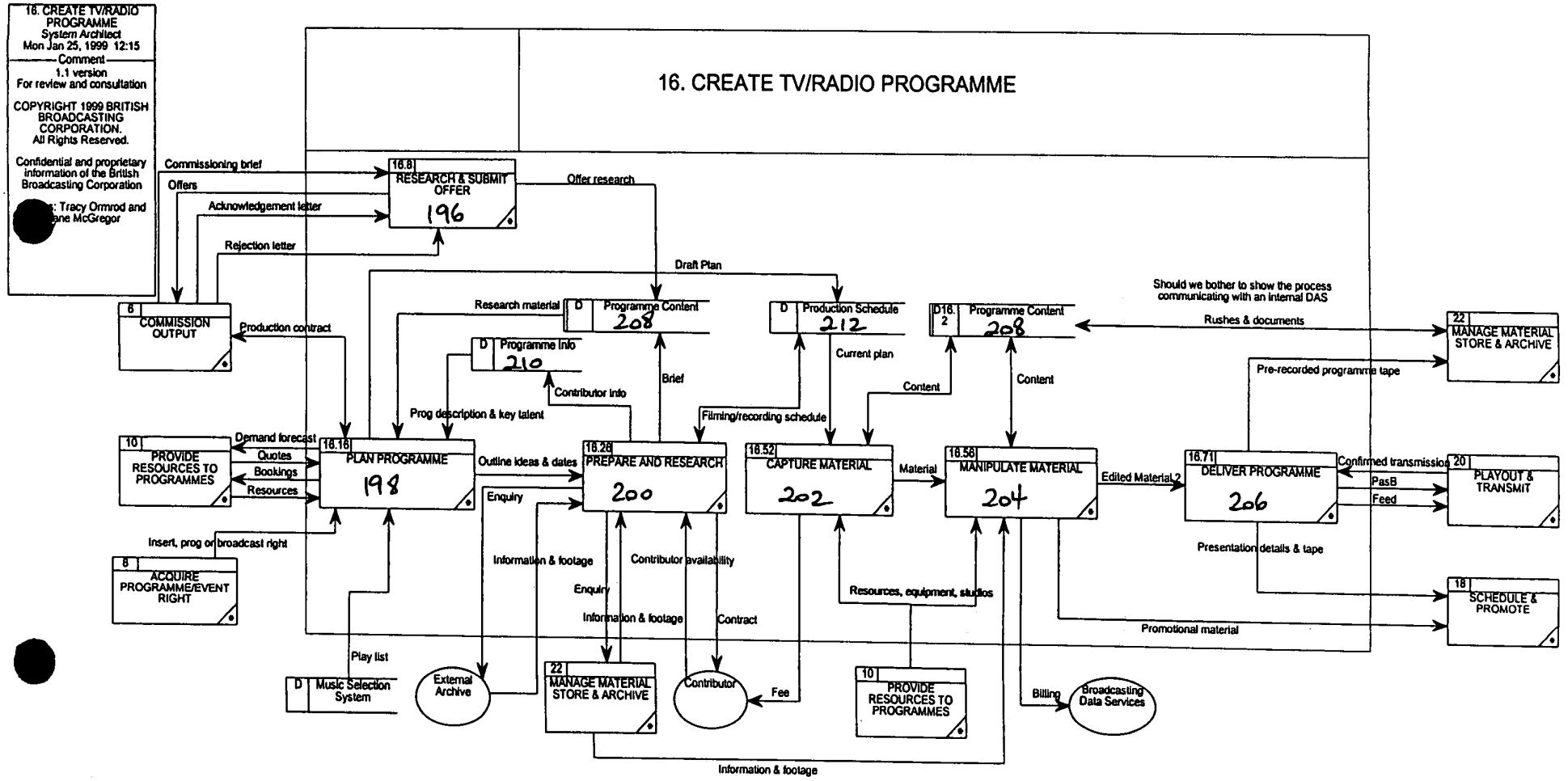


FIGURE 2

45

RIGH
- Key
Right-
Progr
Contr
Contr
- Non-
Type
Territo
Jurisd
Valid-
Valid-
Condi


16. CREATE TV/RADIO PROGRAMME
System Architect
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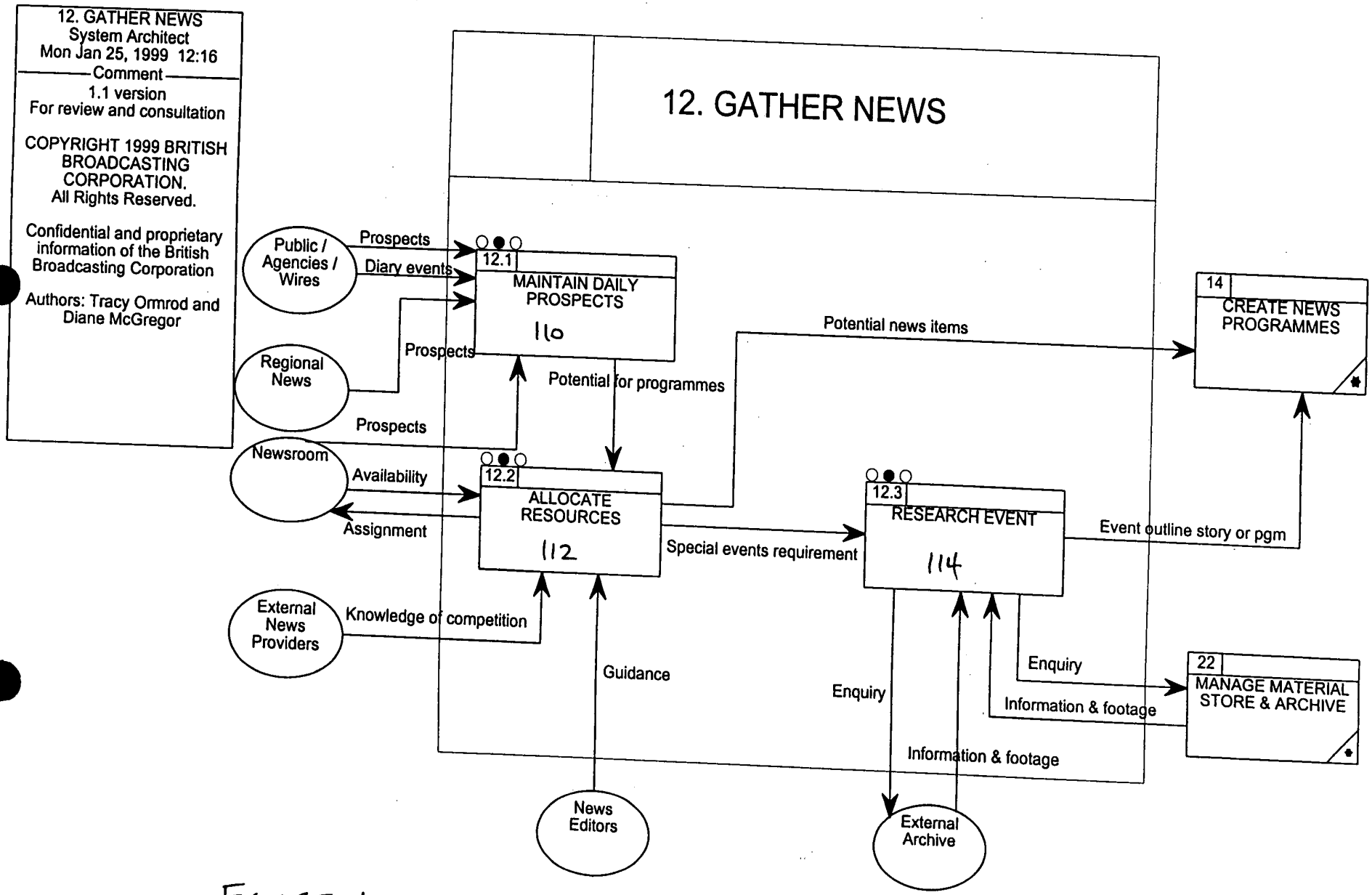
16. CREATE TV/RADIO PROGRAMME
Commissioning brief
Offers
Acknowledgement letter
Rejection letter
16.8 RESEARCH & SUBMIT OFFER 196
Offer research
Draft Plan
6 COMMISSION OUTPUT
Production contract
Research material
D Programme Content 208
D Production Schedule 212
D16.2 Programme Content 208
Should we bother to show the process communicating with an Internal DAS
Rushes & documents
22 MANAGE MATERIAL STORE & ARCHIVE
D Programme Info 210
Contributor info
Brief
Current plan
Content
Content
Pre-recorded programme tape
Prog description & key talent
Filming/recording schedule
10 PROVIDE RESOURCES TO PROGRAMMES
Demand forecast
Quotes
Bookings
Resources
16.16 PLAN PROGRAMME 198
Outline ideas & dates
16.28 PREPARE AND RESEARCH 200
16.52 CAPTURE MATERIAL 202
Material
16.56 MANIPULATE MATERIAL 204
Edited Material2
16.71 DELIVER PROGRAMME 206
Confirmed transmission
PasB
Feed
20 PLAYOUT & TRANSMIT
Enquiry
Insert, prog or broadcast right
8 ACQUIRE PROGRAMME/EVENT RIGHT
Information & footage
Contributor availability
Enquiry
Information & footage
Contract
Resources, equipment, studios
Presentation details & tape
18 SCHEDULE & PROMOTE
Promotional material
Play list
D Music Selection System
External Archive
22 MANAGE MATERIAL STORE & ARCHIVE
Contributor
Fee
10 PROVIDE RESOURCES TO PROGRAMMES
Billing
Broadcasting Data Services
Information & footage

FIGURE 3


12. GATHER NEWS
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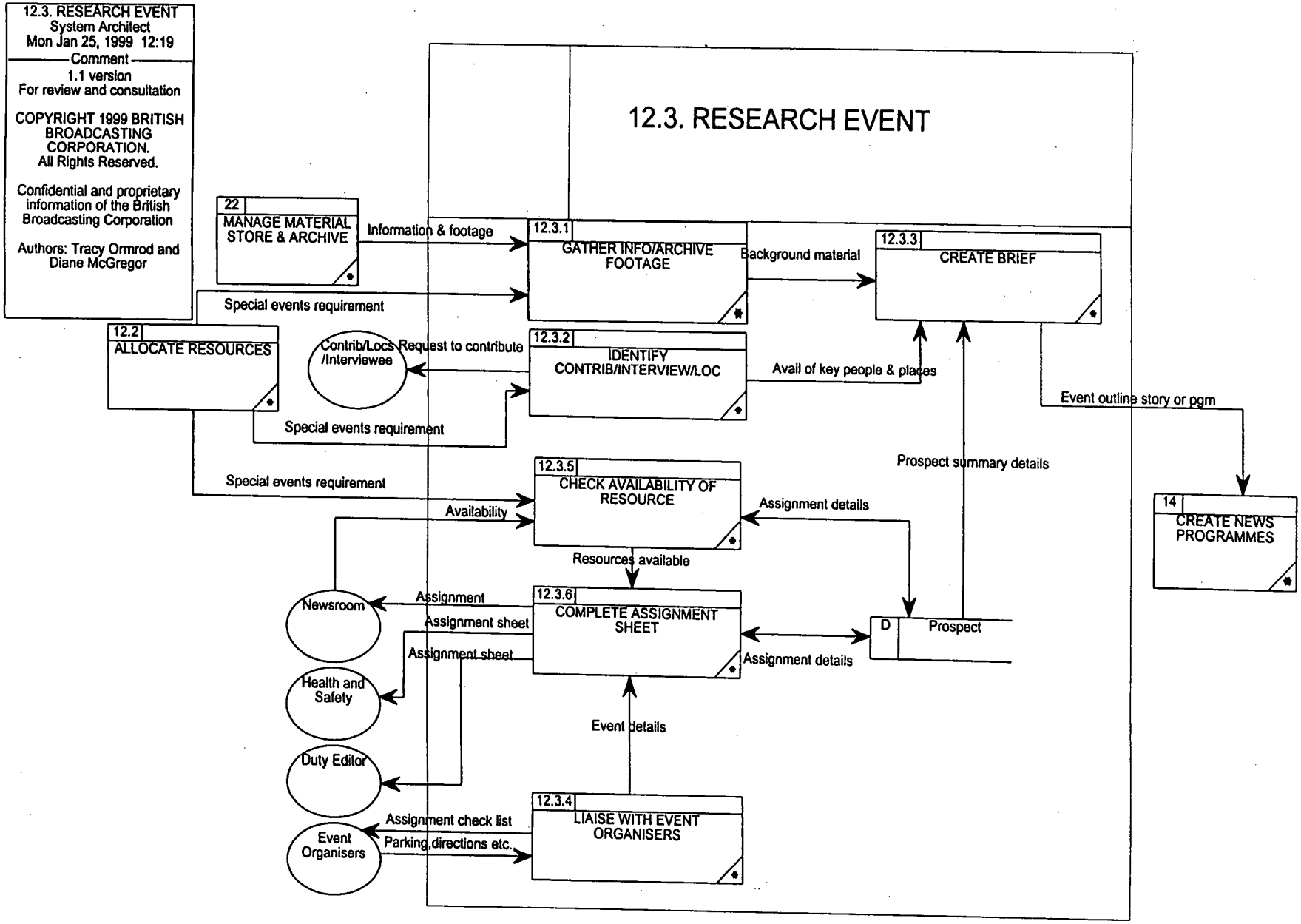
12. GATHER NEWS
Public / Agencies / Wires
Prospects
Diary events
12.1
MAINTAIN DAILY PROSPECTS
110
Regional News
Prospects
Prospects
Potential for programmes
Potential news items
14
CREATE NEWS PROGRAMMES
Newsroom
Availability
Assignment
12.2
ALLOCATE RESOURCES
112
Special events requirement
12.3
RESEARCH EVENT
114
Event outline story or pgm
External News Providers
Knowledge of competition
Guidance
Enquiry
Enquiry
Information & footage
22
MANAGE MATERIAL STORE & ARCHIVE
Information & footage
News Editors
External Archive

FIGURE 4


12.3. RESEARCH EVENT
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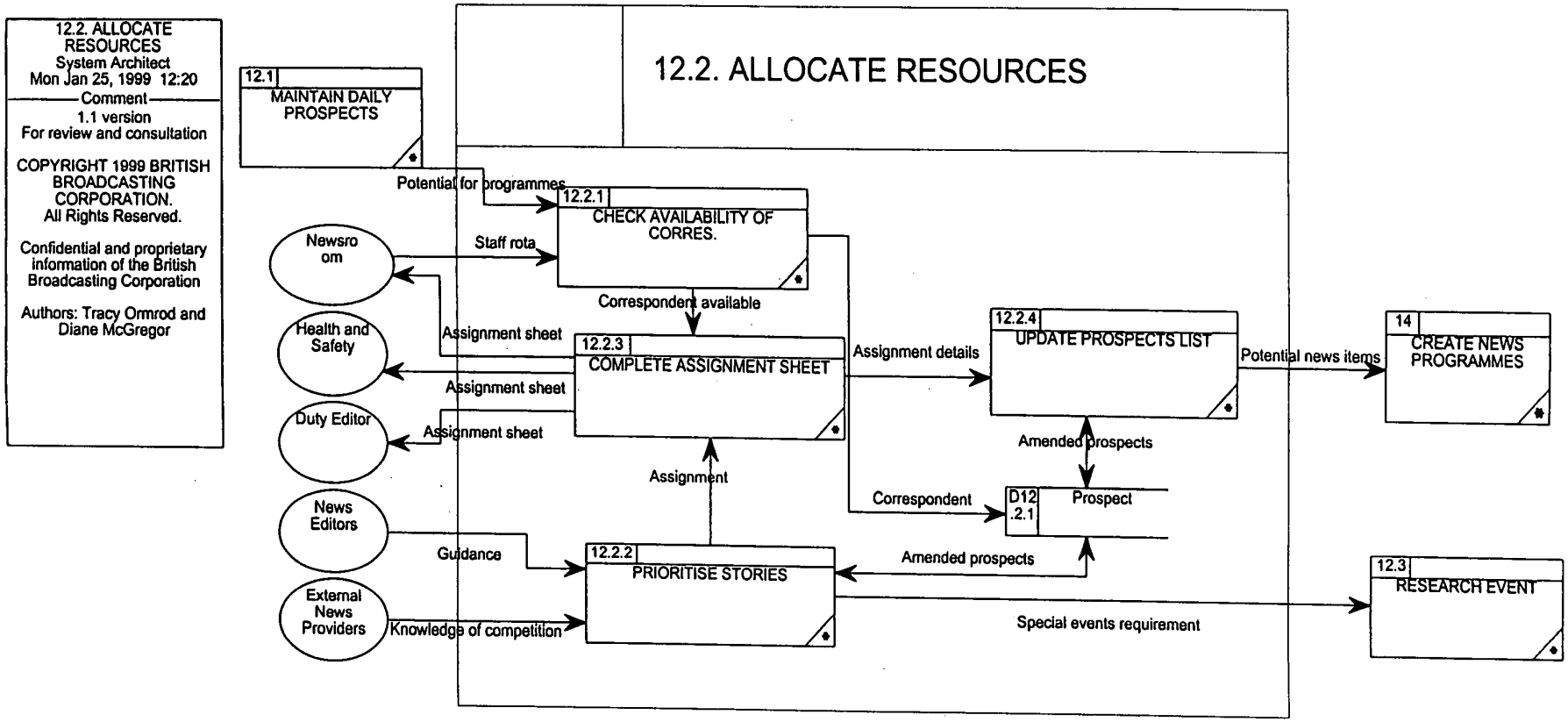
12.3. RESEARCH EVENT
22
MANAGE MATERIAL STORE & ARCHIVE
Information & footage
12.3.1
GATHER INFO/ARCHIVE FOOTAGE
Background material
12.3.3
CREATE BRIEF
Special events requirement
12.2
ALLOCATE RESOURCES
Contrib/Locs /Interviewee
Request to contribute
12.3.2
IDENTIFY CONTRIB/INTERVIEW/LOC
Avail of key people & places
Event outline story or pgm
Special events requirement
Prospect summary details
Special events requirement
12.3.5
CHECK AVAILABILITY OF RESOURCE
Assignment details
Availability
14
CREATE NEWS PROGRAMMES
Resources available
Newsroom
Assignment
12.3.6
COMPLETE ASSIGNMENT SHEET
D
Prospect
Assignment sheet
Assignment details
Assignment sheet
Health and Safety
Event details
Duty Editor
12.3.4
LIAISE WITH EVENT ORGANISERS
Assignment check list
Event Organisers
Parking,directions etc.

FIGURE 5


12.2. ALLOCATE RESOURCES
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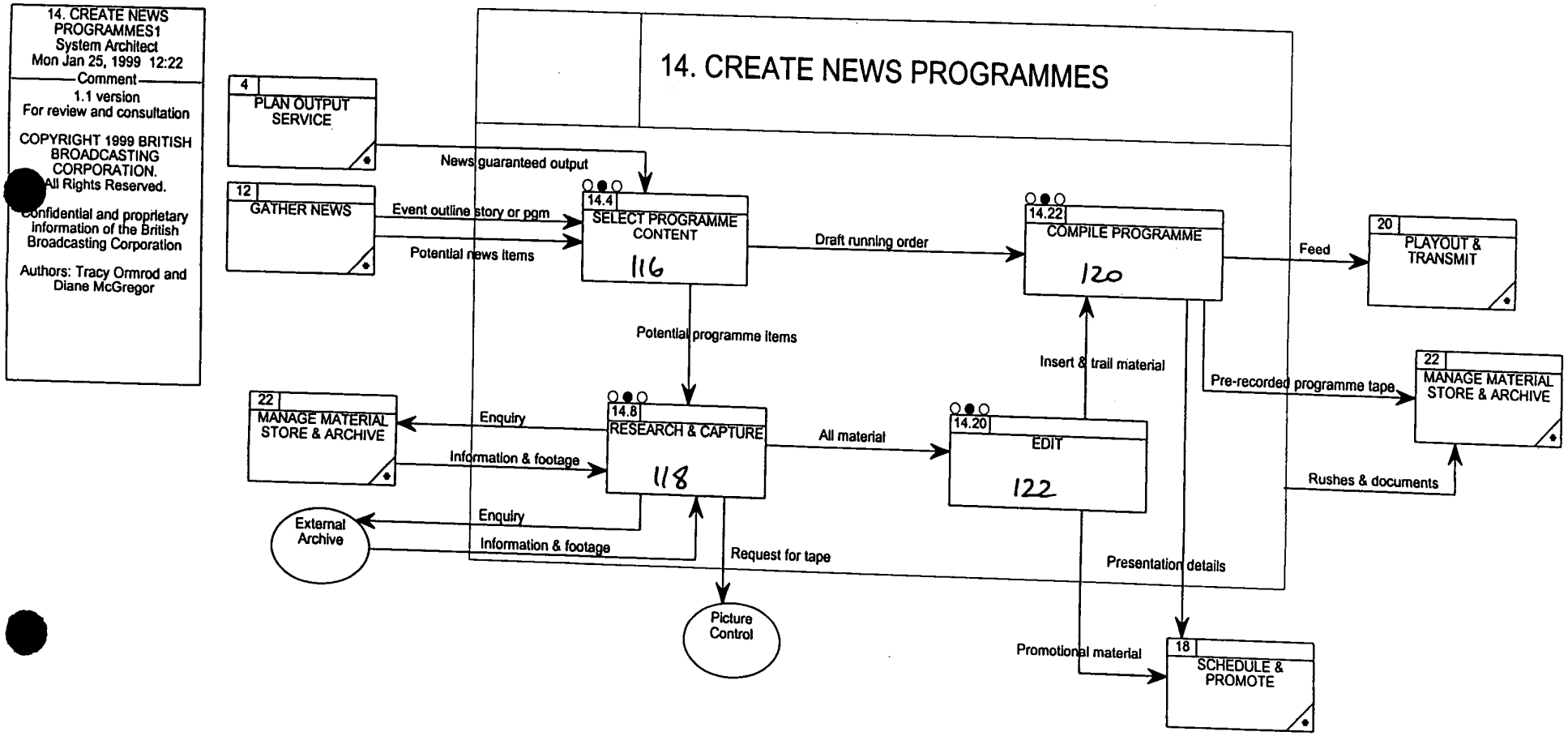
12.2. ALLOCATE RESOURCES
12.1 MAINTAIN DAILY PROSPECTS
Potential for programmes
12.2.1 CHECK AVAILABILITY OF CORRES.
Newsroom
Staff rota
Correspondent available
Health and Safety
Assignment sheet
12.2.3 COMPLETE ASSIGNMENT SHEET
Assignment details
12.2.4 UPDATE PROSPECTS LIST
Potential news items
14 CREATE NEWS PROGRAMMES
Assignment sheet
Duty Editor
Assignment sheet
Amended prospects
Assignment
Correspondent
D12 .2.1 Prospect
News Editors
Guidance
12.2.2 PRIORITISE STORIES
Amended prospects
External News Providers
Knowledge of competition
12.3 RESEARCH EVENT
Special events requirement

FIGURE 6


14. CREATE NEWS PROGRAMMES1
System Architect
Mon Jan 25, 1999 12:22
Comment
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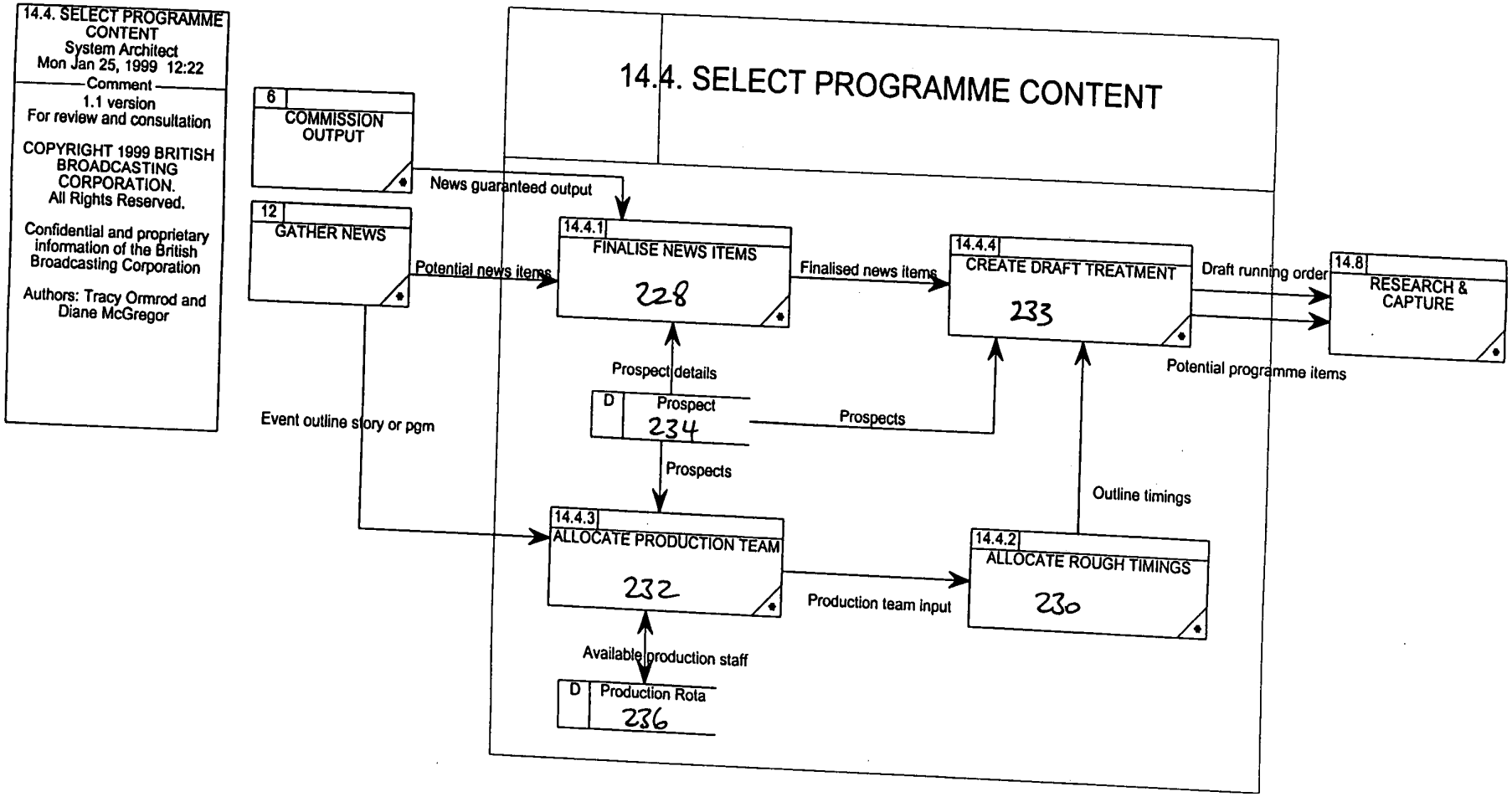
14. CREATE NEWS PROGRAMMES
4
PLAN OUTPUT SERVICE
12
GATHER NEWS
News guaranteed output
Event outline story or pgm
Potential news items
14.4
SELECT PROGRAMME CONTENT
116
Draft running order
14.22
COMPILE PROGRAMME
120
Feed
20
PLAYOUT & TRANSMIT
Potential programme items
Insert & trail material
Pre-recorded programme tape
22
MANAGE MATERIAL STORE & ARCHIVE
22
MANAGE MATERIAL STORE & ARCHIVE
Enquiry
Information & footage
14.8
RESEARCH & CAPTURE
118
All material
14.20
EDIT
122
Rushes & documents
External Archive
Enquiry
Information & footage
Request for tape
Presentation details
Picture Control
Promotional material
18
SCHEDULE & PROMOTE

FIGURE 7


14.4. SELECT PROGRAMME CONTENT
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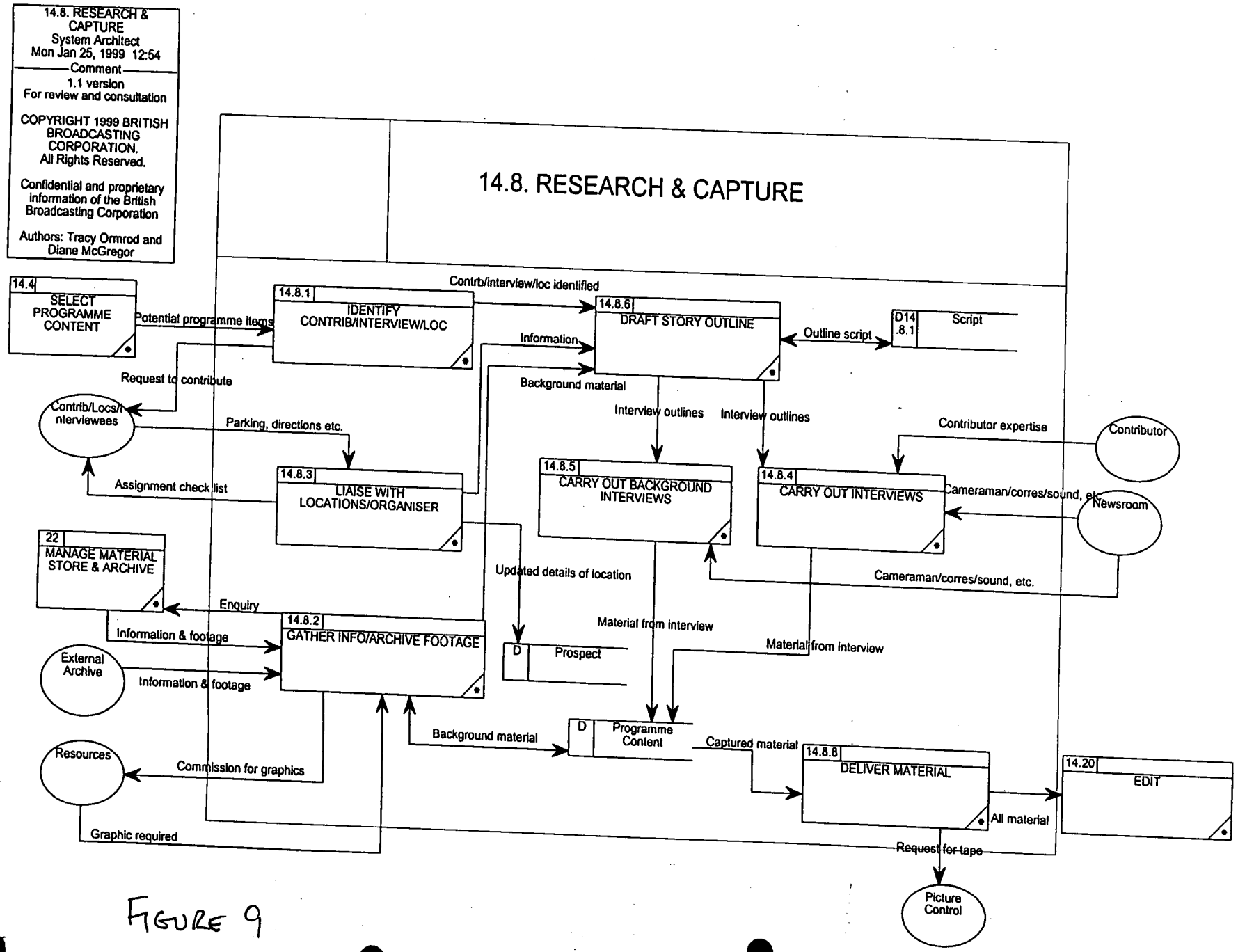
14.4. SELECT PROGRAMME CONTENT
6
COMMISSION OUTPUT
12
GATHER NEWS
News guaranteed output
Potential news items
14.4.1
FINALISE NEWS ITEMS
228
Finalised news items
14.4.4
CREATE DRAFT TREATMENT
233
Draft running order
14.8
RESEARCH & CAPTURE
Potential programme items
Prospect details
D
Prospect
234
Prospects
Event outline story or pgm
Prospects
Outline timings
14.4.3
ALLOCATE PRODUCTION TEAM
232
Production team input
14.4.2
ALLOCATE ROUGH TIMINGS
230
Available production staff
D
Production Rota
236

FIGURE 8


14.8. RESEARCH & CAPTURE
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14.8. RESEARCH & CAPTURE
14.4 SELECT PROGRAMME CONTENT
Potential programme items
14.8.1 IDENTIFY CONTRIB/INTERVIEW/LOC
Contrb/interview/loc identified
14.8.6 DRAFT STORY OUTLINE
Outline script
D14 .8.1 Script
Information
Request to contribute
Background material
Contrib/Locs/Interviewees
Parking, directions etc.
Interview outlines
Interview outlines
Contributor expertise
Contributor
14.8.3 LIAISE WITH LOCATIONS/ORGANISER
Assignment check list
14.8.5 CARRY OUT BACKGROUND INTERVIEWS
14.8.4 CARRY OUT INTERVIEWS
Cameraman/corres/sound, etc.
Newsroom
22 MANAGE MATERIAL STORE & ARCHIVE
Updated details of location
Cameraman/corres/sound, etc.
Enquiry
14.8.2 GATHER INFO/ARCHIVE FOOTAGE
Material from interview
Information & footage
D Prospect
Material from interview
External Archive
Information & footage
Background material
D Programme Content
Captured material
14.8.8 DELIVER MATERIAL
14.20 EDIT
Resources
Commission for graphics
All material
Graphic required
Request for tape
Picture Control

FIGURE 9

6. Commission Output
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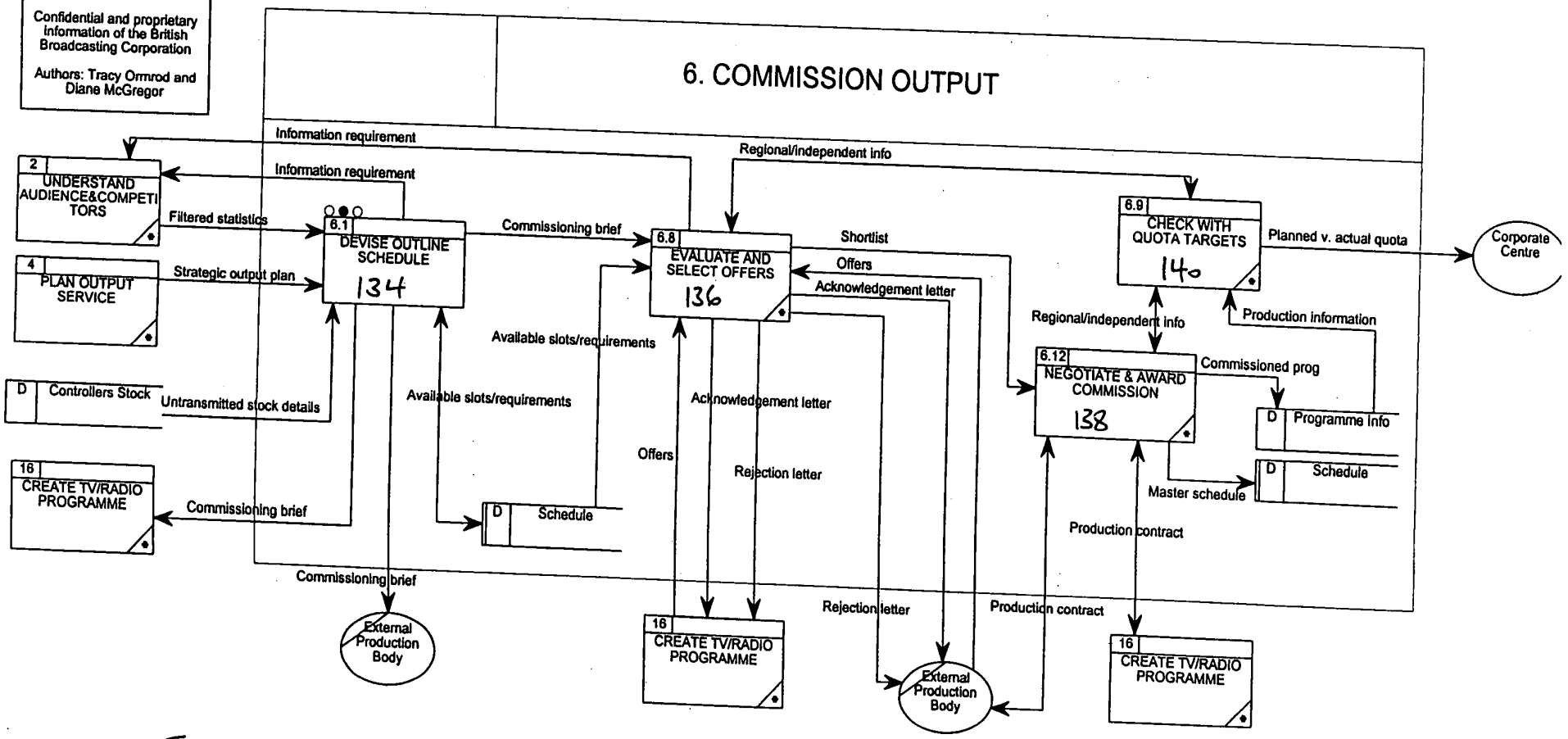

FIGURE 10

EVALUATE AND SELECT OFFERS
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Comment
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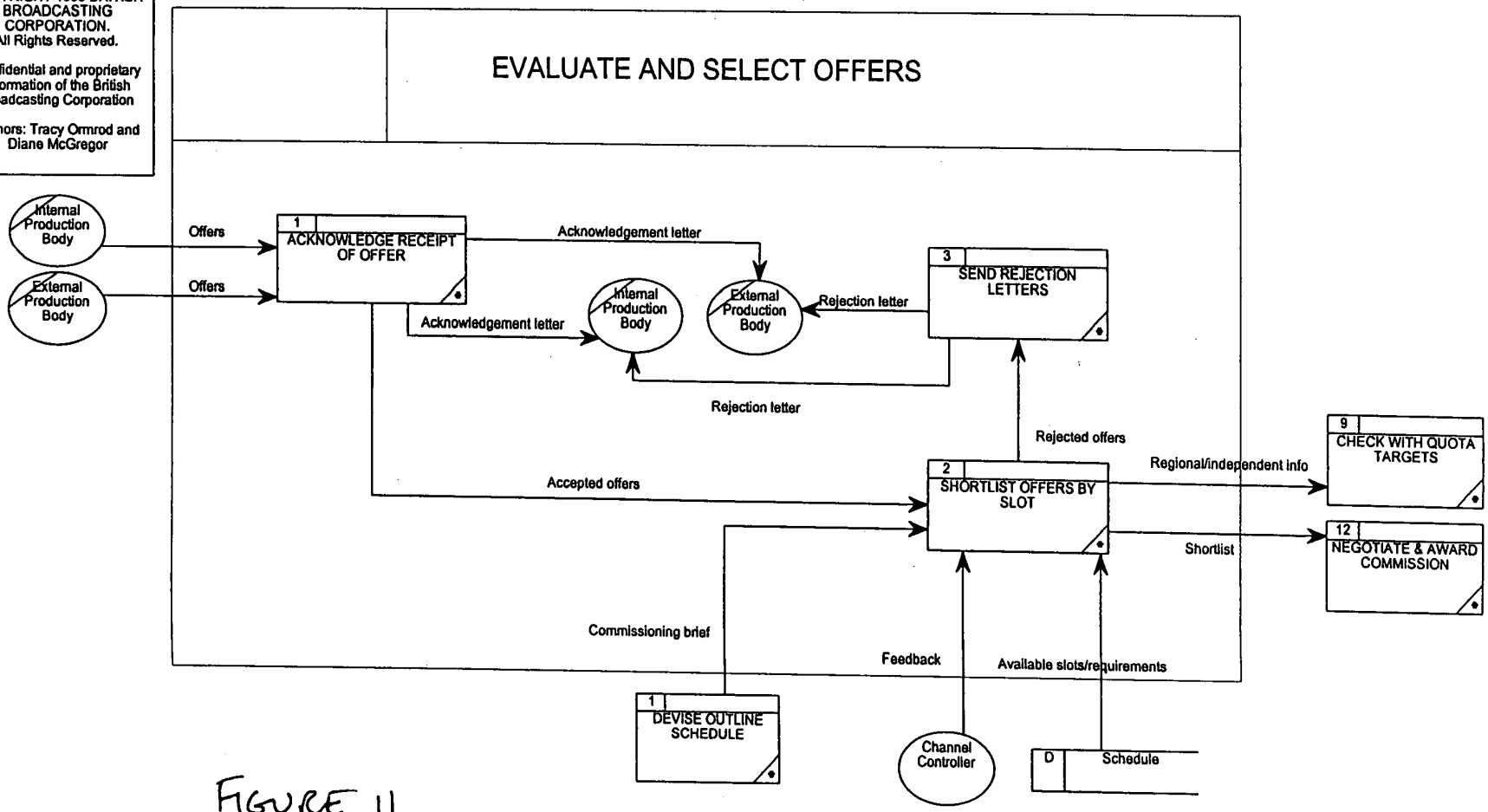
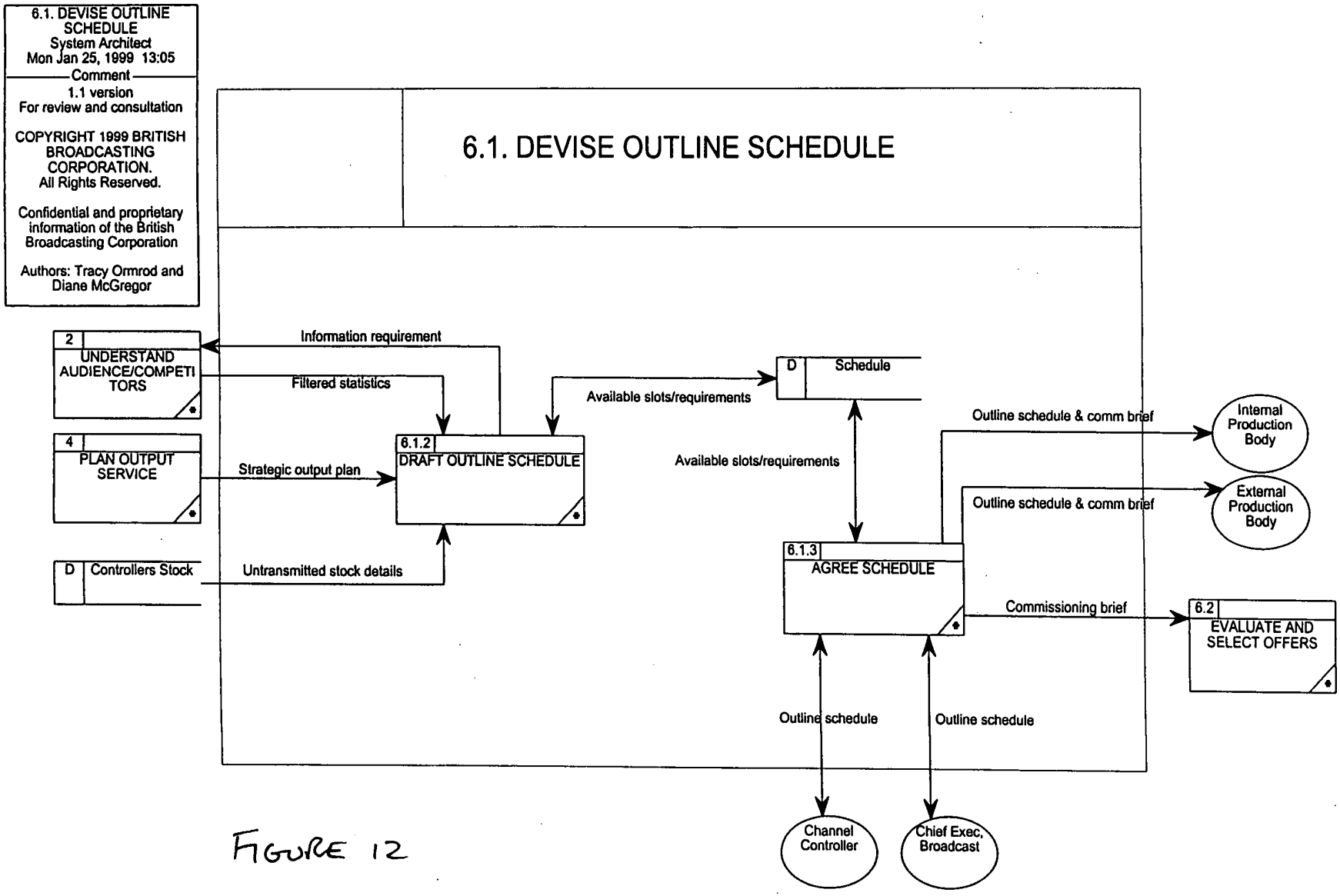


FIGURE 11


6.1. DEVISE OUTLINE SCHEDULE
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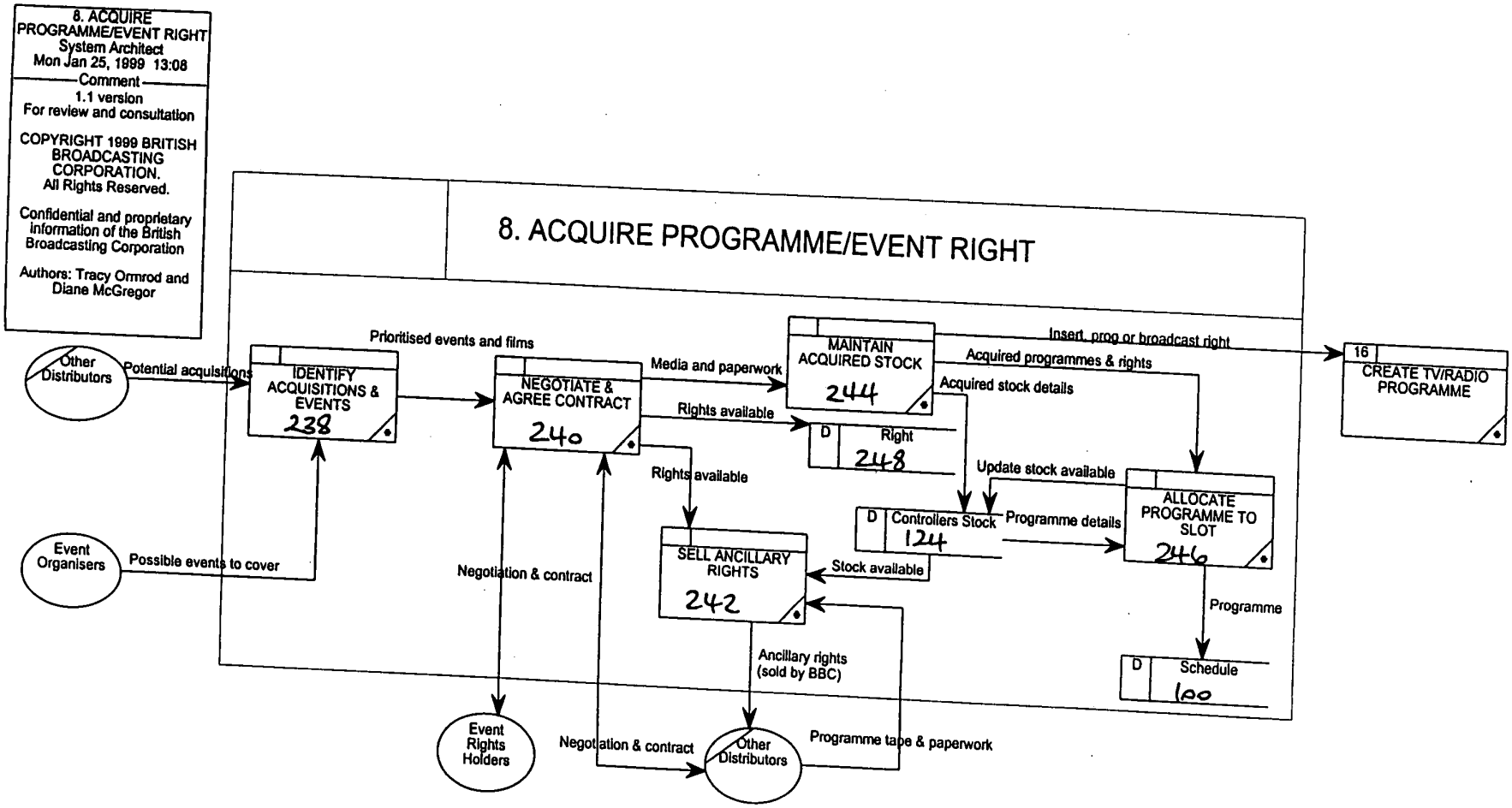
6.1. DEVISE OUTLINE SCHEDULE
2
UNDERSTAND AUDIENCE/COMPETITORS
4
PLAN OUTPUT SERVICE
D
Controllers Stock
Information requirement
Filtered statistics
Strategic output plan
Untransmitted stock details
6.1.2
DRAFT OUTLINE SCHEDULE
D
Schedule
Available slots/requirements
Available slots/requirements
6.1.3
AGREE SCHEDULE
Outline schedule & comm brief
Outline schedule & comm brief
Internal Production Body
External Production Body
Commissioning brief
6.2
EVALUATE AND SELECT OFFERS
Outline schedule
Outline schedule
Channel Controller
Chief Exec. Broadcast

FIGURE 12


8. ACQUIRE PROGRAMME/EVENT RIGHT
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8. ACQUIRE PROGRAMME/EVENT RIGHT
Other Distributors
Potential acquisitions
IDENTIFY ACQUISITIONS & EVENTS
238
Prioritised events and films
NEGOTIATE & AGREE CONTRACT
240
Media and paperwork
MAINTAIN ACQUIRED STOCK
244
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16
CREATE TV/RADIO PROGRAMME
Acquired programmes & rights
Acquired stock details
Rights available
D
Right
248
Rights available
Update stock available
D
Controllers Stock
124
Programme details
ALLOCATE PROGRAMME TO SLOT
246
Event Organisers
Possible events to cover
SELL ANCILLARY RIGHTS
242
Stock available
Programme
Negotiation & contract
Ancillary rights (sold by BBC)
D
Schedule
100
Event Rights Holders
Negotiation & contract
Other Distributors
Programme tape & paperwork

FIGURE 13

18. SCHEDULE PRESENT & PROMOTE
System Architect
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Comment

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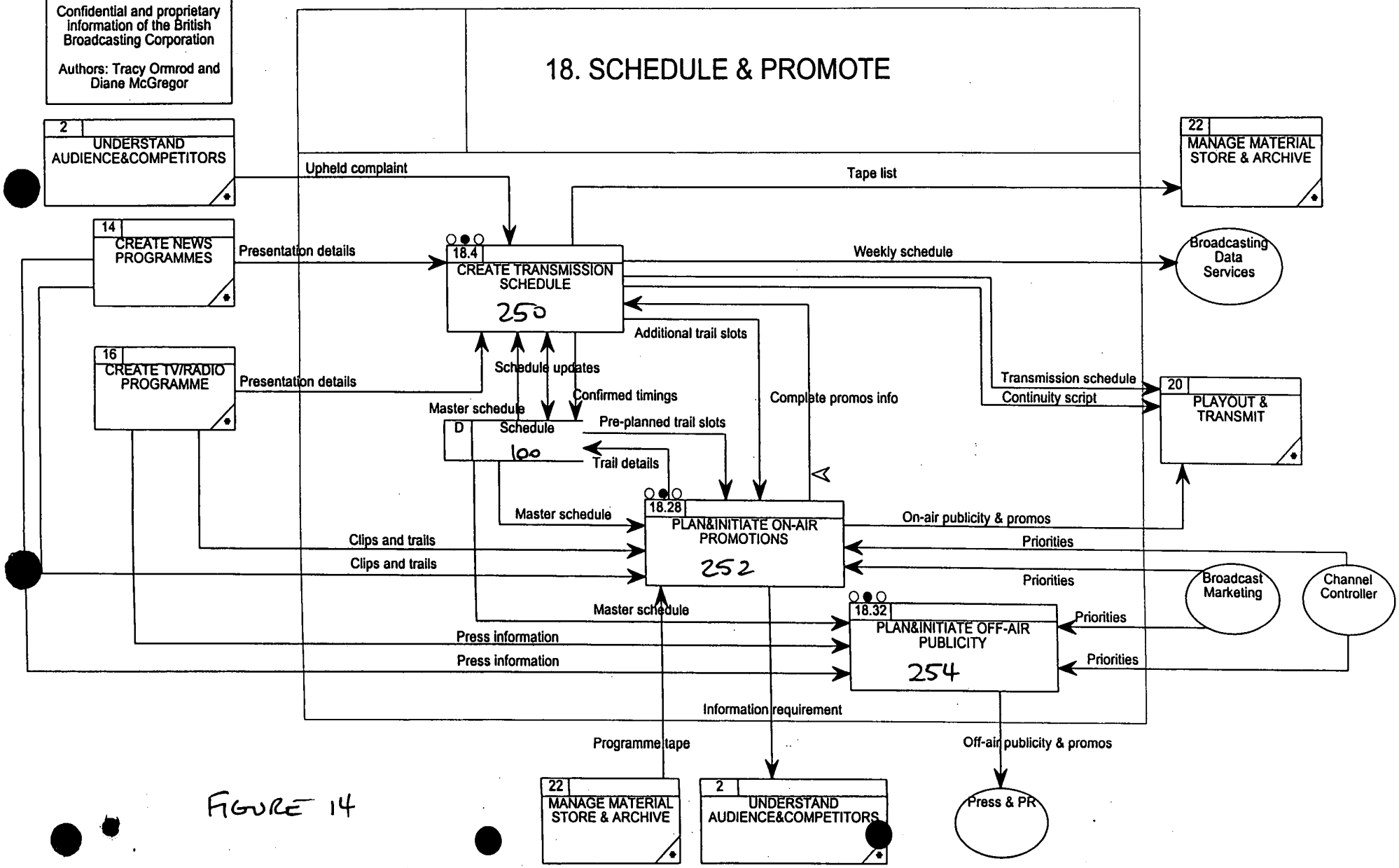

FIGURE 14

18.4. CREATE TRANSMISSION SCHEDULE
System Architect
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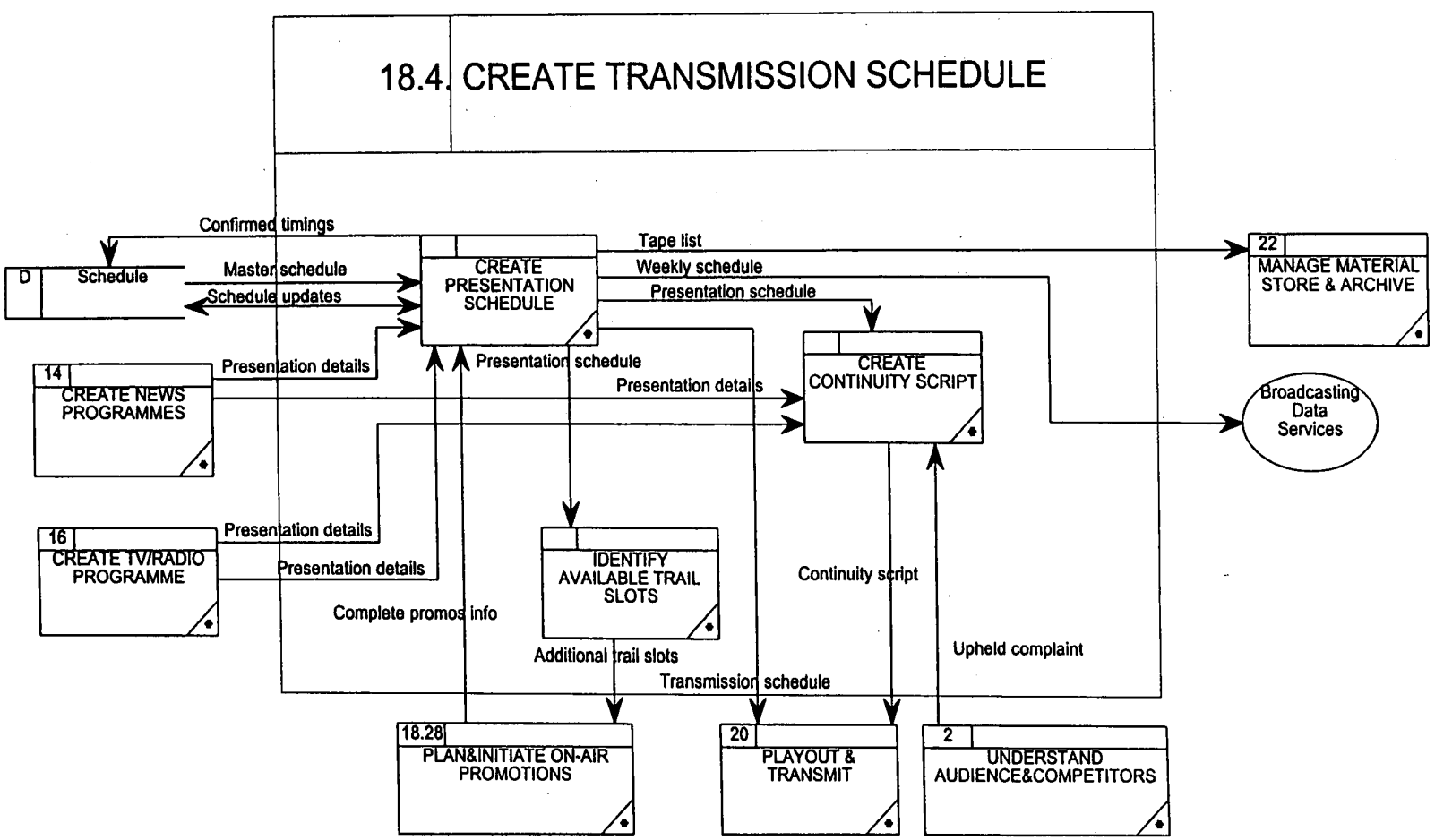

FIGURE 15

18.28. PLAN&INITIATE ON-AIR PUBLICITY
System Architect
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Comment
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DRAFT

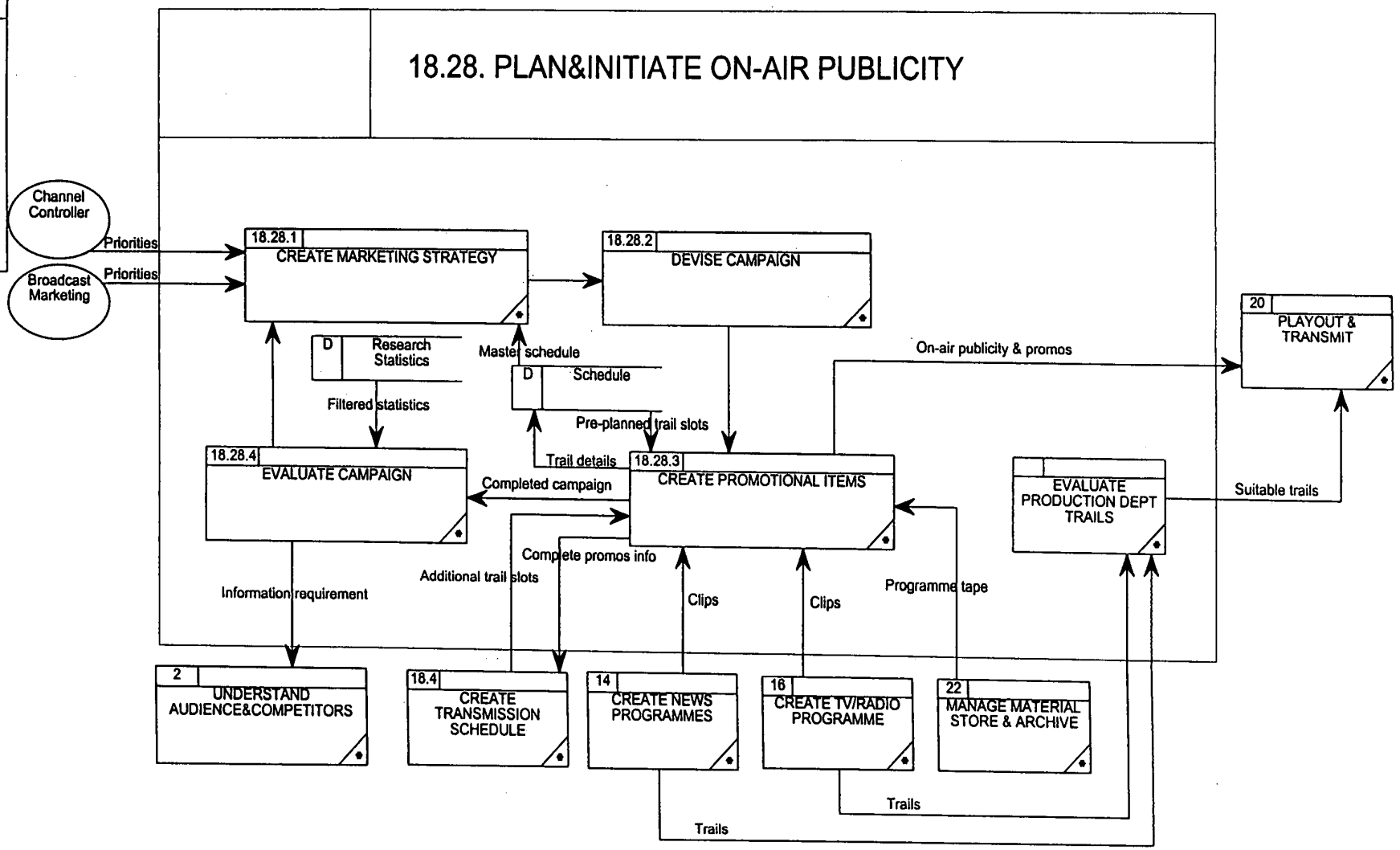
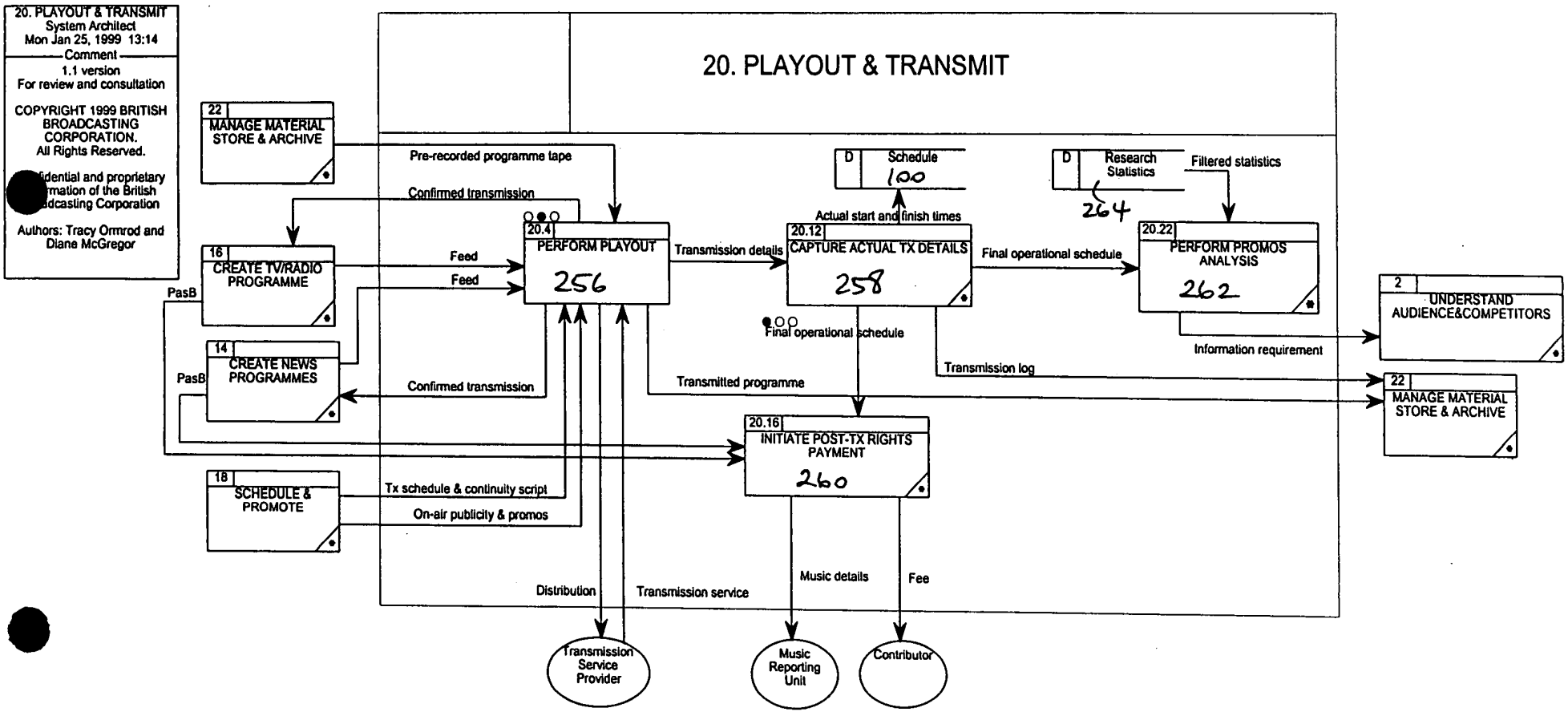


FIGURE 16


20. PLAYOUT & TRANSMIT
System Architect
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Comment
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20. PLAYOUT & TRANSMIT
22 MANAGE MATERIAL STORE & ARCHIVE
Pre-recorded programme tape
Confirmed transmission
D Schedule 100
D Research Statistics 264
Filtered statistics
Actual start and finish times
16 CREATE TV/RADIO PROGRAMME
Feed
Feed
20.4 PERFORM PLAYOUT 256
Transmission details
20.12 CAPTURE ACTUAL TX DETAILS 258
Final operational schedule
20.22 PERFORM PROMOS ANALYSIS 262
2 UNDERSTAND AUDIENCE&COMPETITORS
Information requirement
PasB
14 CREATE NEWS PROGRAMMES
PasB
Confirmed transmission
Final operational schedule
Transmission log
Transmitted programme
22 MANAGE MATERIAL STORE & ARCHIVE
20.16 INITIATE POST-TX RIGHTS PAYMENT 260
18 SCHEDULE & PROMOTE
Tx schedule & continuity script
On-air publicity & promos
Distribution
Transmission service
Music details
Fee
Transmission Service Provider
Music Reporting Unit
Contributor

FIGURE 17

1st Draft

20.4. PERFORM PLAYOUT
System Architect
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Comment
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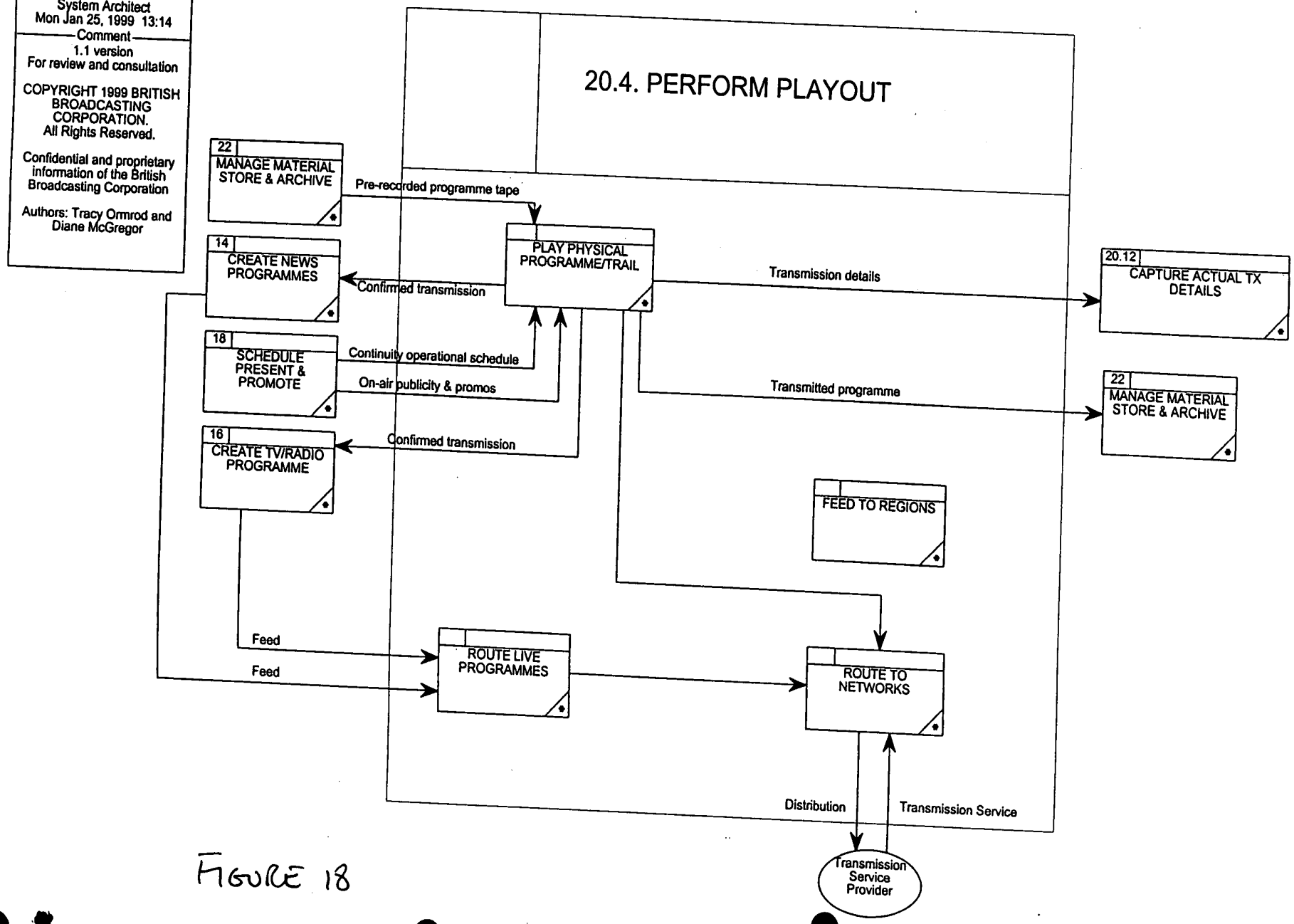
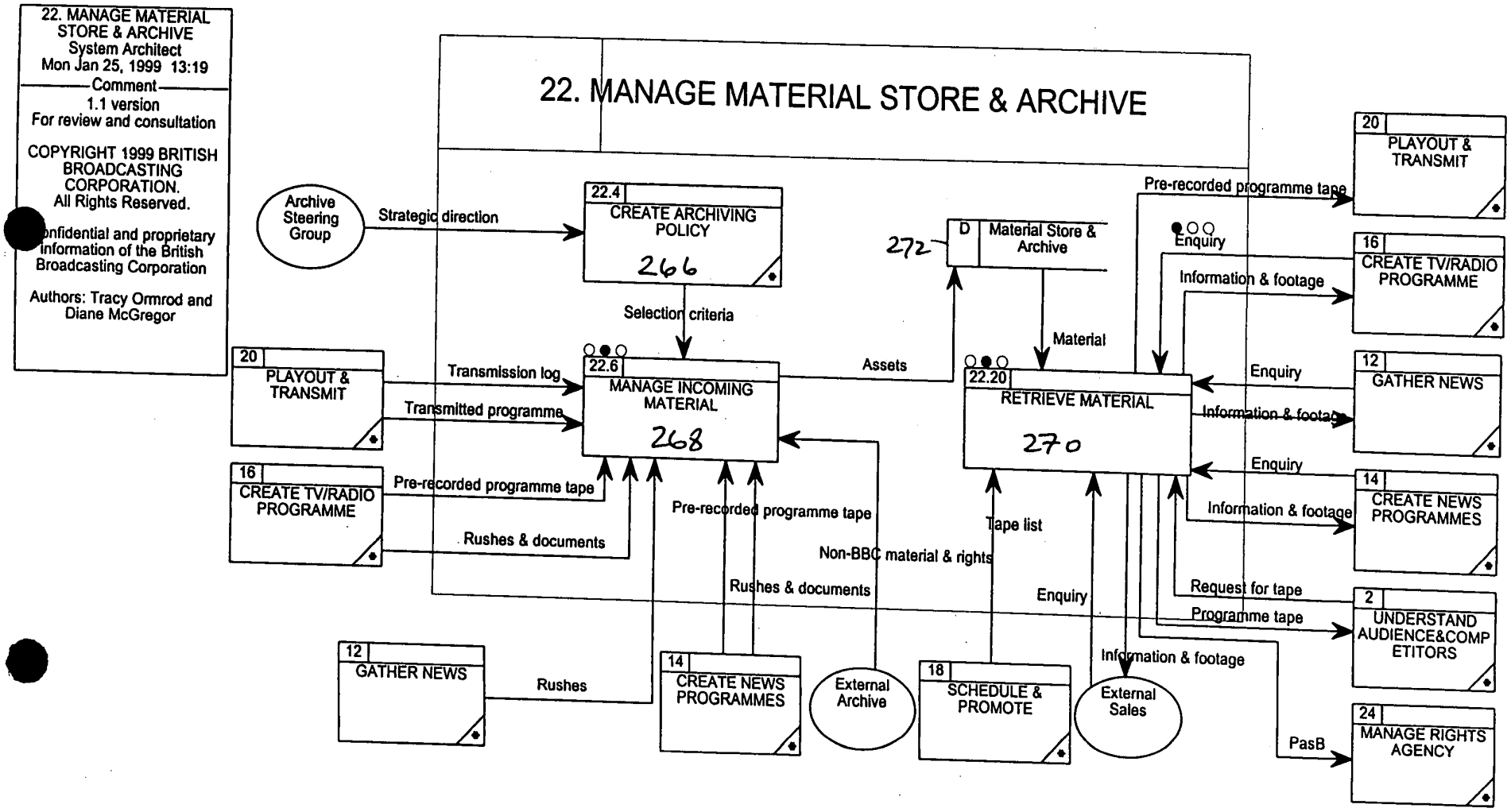


FIGURE 18


22. MANAGE MATERIAL STORE & ARCHIVE
System Architect
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Comment
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22. MANAGE MATERIAL STORE & ARCHIVE
Archive Steering Group
Strategic direction
22.4 CREATE ARCHIVING POLICY 266
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D Material Store & Archive
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Assets
20 PLAYOUT & TRANSMIT
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22.6 MANAGE INCOMING MATERIAL 268
22.20 RETRIEVE MATERIAL 270
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Pre-recorded programme tape
Non-BBC material & rights
Rushes & documents
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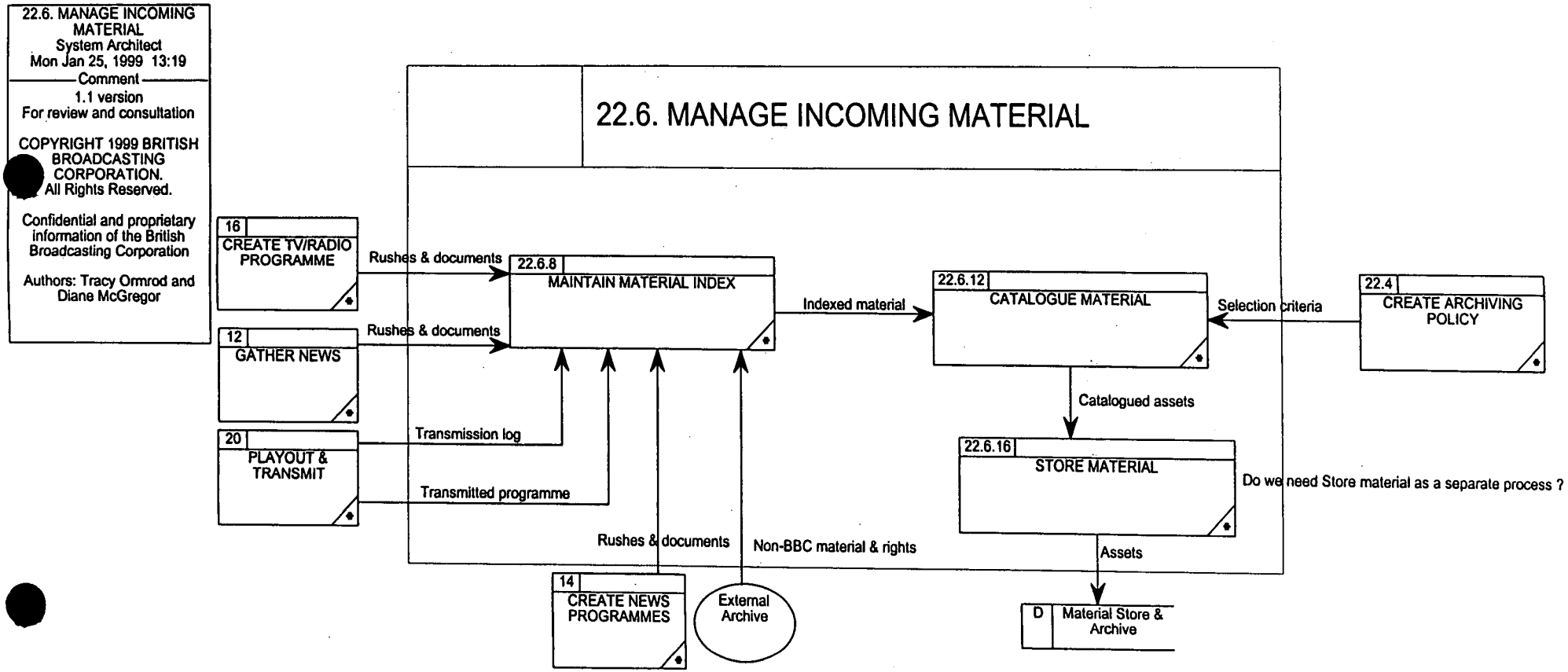
Enquiry
Pre-recorded programme tape
Enquiry
Information & footage
16 CREATE TV/RADIO PROGRAMME
Enquiry
Information & footage
12 GATHER NEWS
Enquiry
Information & footage
14 CREATE NEWS PROGRAMMES
Request for tape
Programme tape
2 UNDERSTAND AUDIENCE&COMPETITORS
12 GATHER NEWS
Rushes
14 CREATE NEWS PROGRAMMES
External Archive
18 SCHEDULE & PROMOTE
External Sales
Information & footage
PasB
24 MANAGE RIGHTS AGENCY

FIGURE 19


22.6. MANAGE INCOMING MATERIAL
System Architect
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Comment
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22.6. MANAGE INCOMING MATERIAL
16
CREATE TV/RADIO PROGRAMME
12
GATHER NEWS
20
PLAYOUT & TRANSMIT
Rushes & documents
Rushes & documents
Transmission log
Transmitted programme
22.6.8
MAINTAIN MATERIAL INDEX
Indexed material
22.6.12
CATALOGUE MATERIAL
Selection criteria
22.4
CREATE ARCHIVING POLICY
Catalogued assets
22.6.16
STORE MATERIAL
Do we need Store material as a separate process ?
Rushes & documents
Non-BBC material & rights
Assets
14
CREATE NEWS PROGRAMMES
External Archive
D
Material Store & Archive

FIGURE 20

22.20. RETRIEVE MATERIAL
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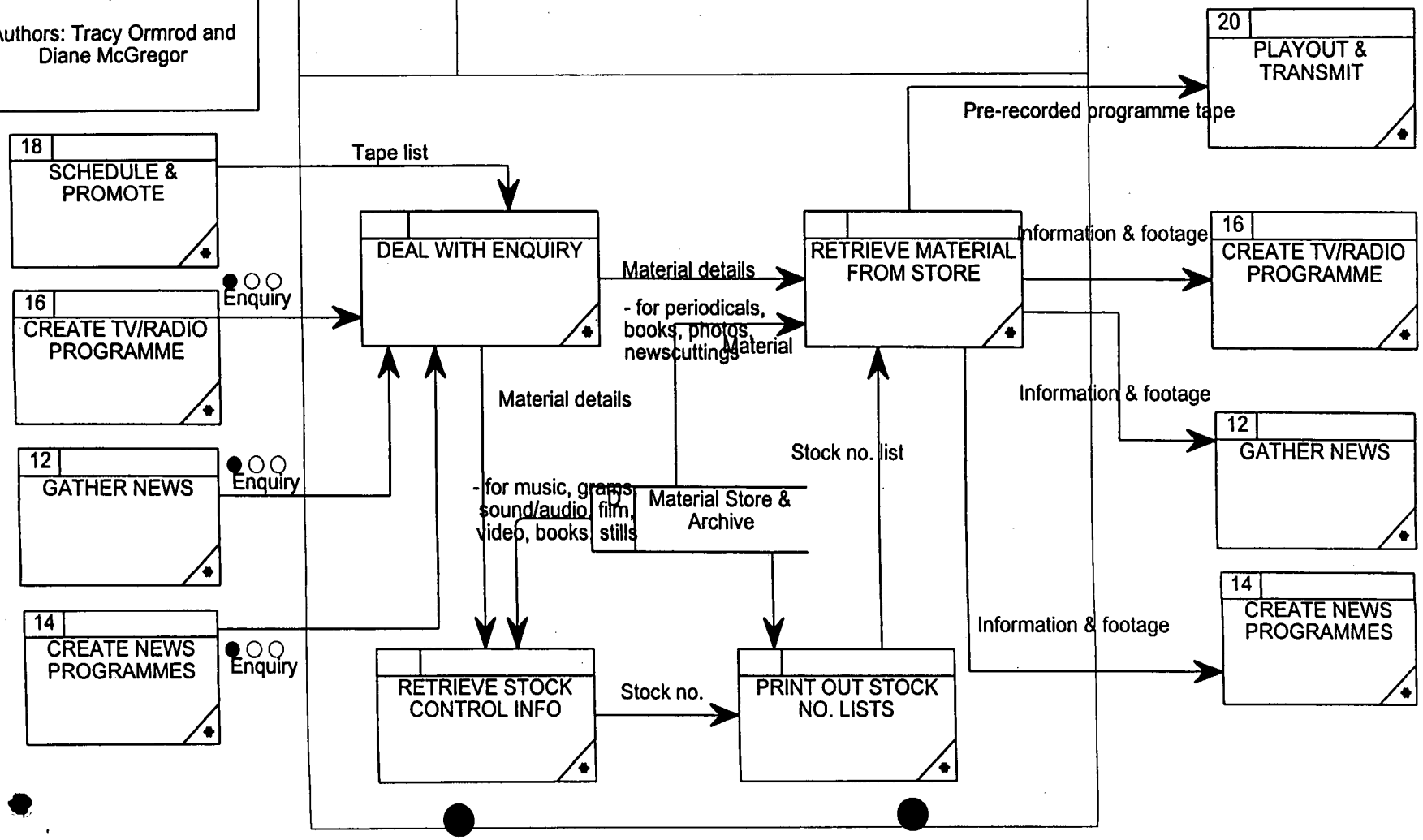
22.20. RETRIEVE MATERIAL



24. MANAGE RIGHTS AGENCY
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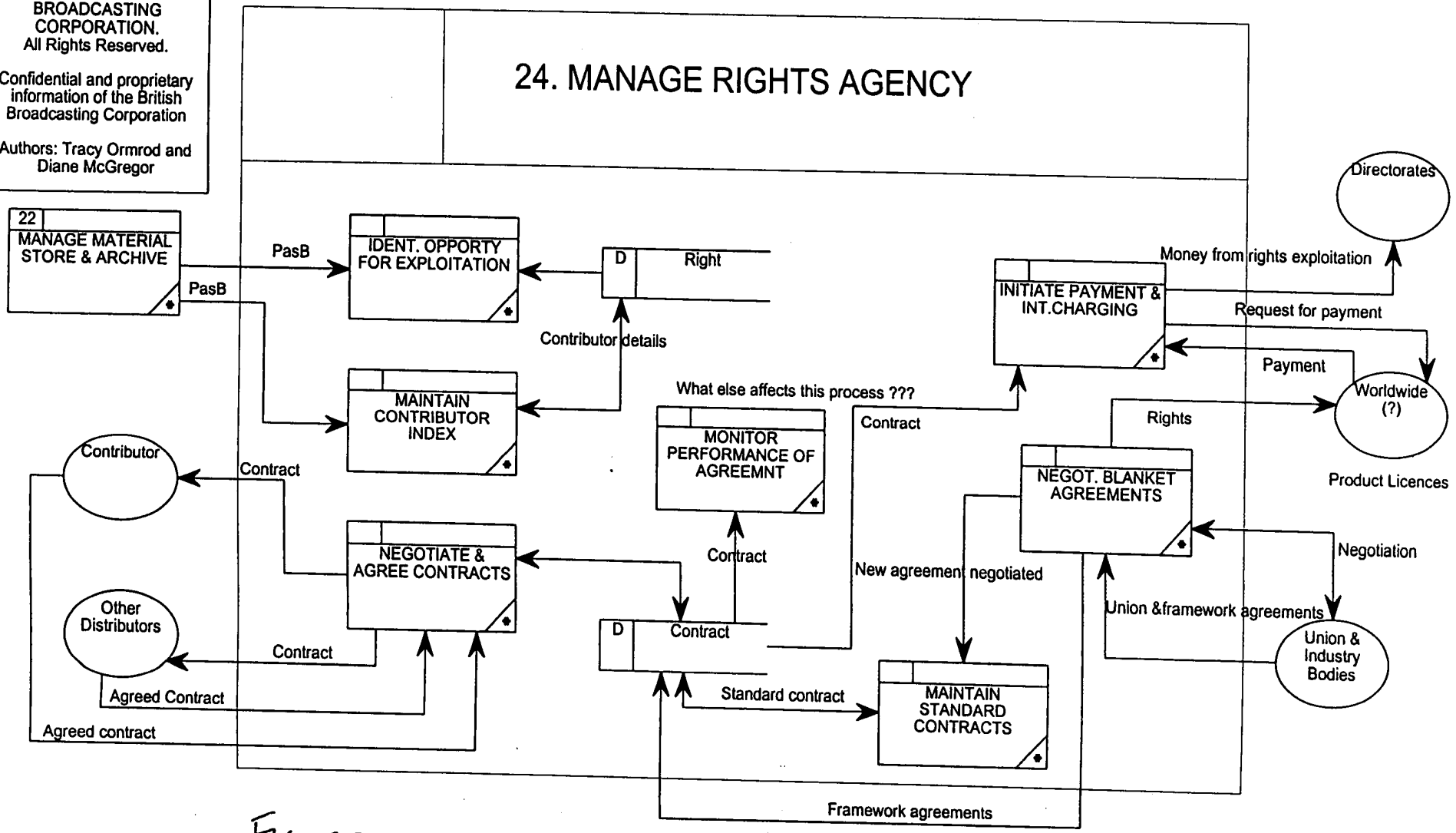

FIGURE 22

4. PLAN OUTPUT SERVICE
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Comment
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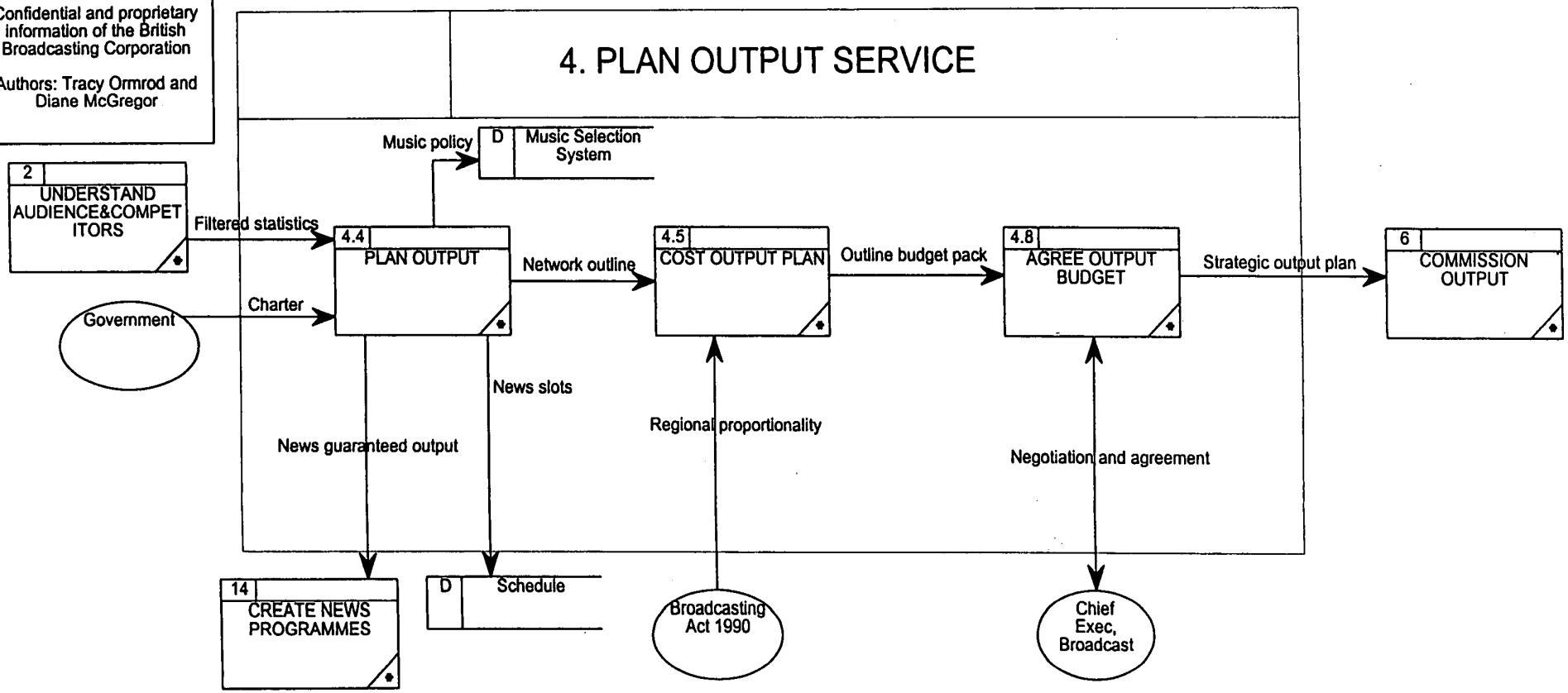
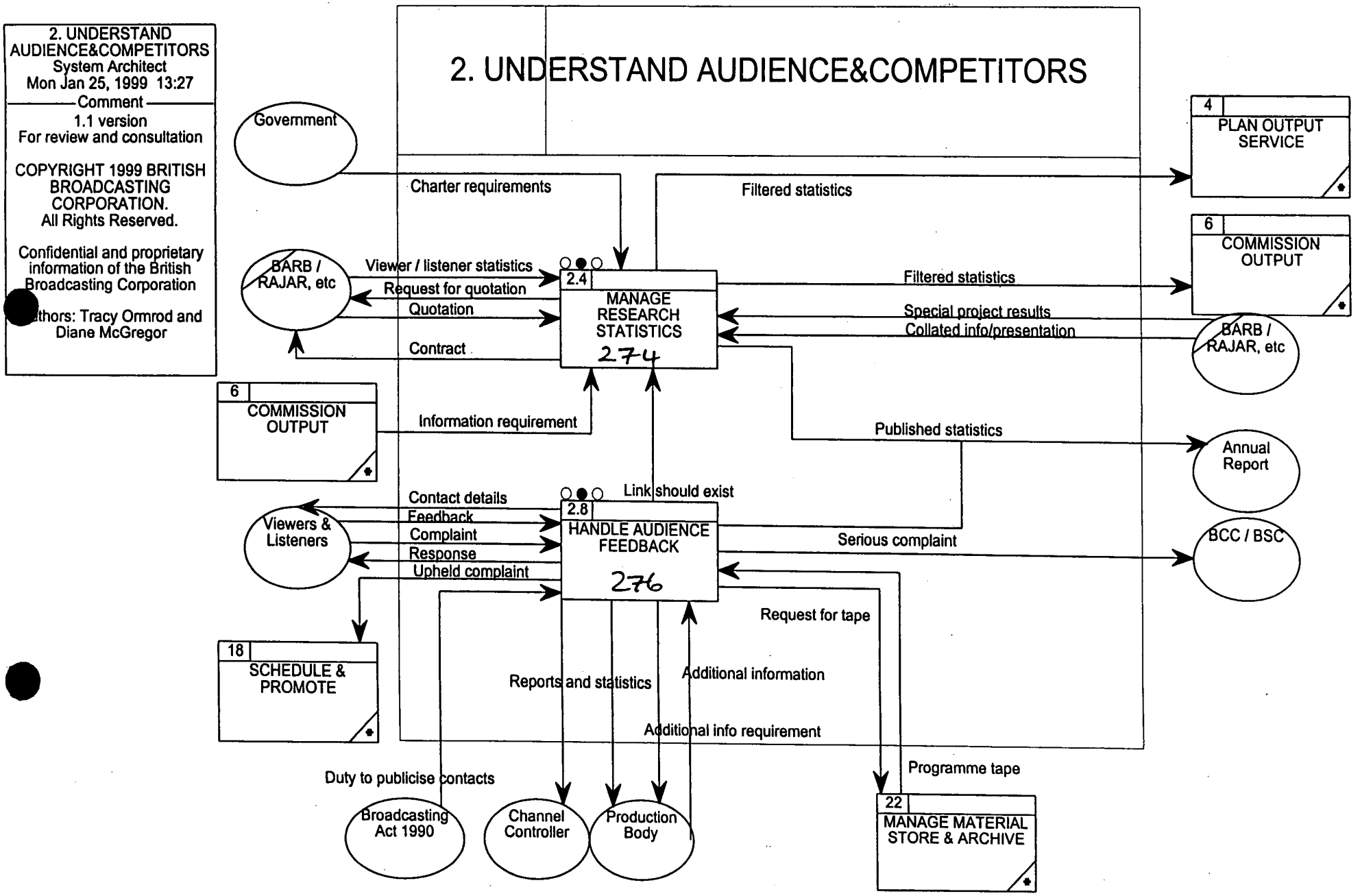


FIGURE 23


2. UNDERSTAND AUDIENCE&COMPETITORS
System Architect
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2. UNDERSTAND AUDIENCE&COMPETITORS
Government
Charter requirements
Filtered statistics
4
PLAN OUTPUT SERVICE
6
COMMISSION OUTPUT
BARB / RAJAR, etc
Viewer / listener statistics
Request for quotation
Quotation
Contract
2.4
MANAGE RESEARCH STATISTICS
274
Filtered statistics
Special project results
Collated info/presentation
BARB / RAJAR, etc
6
COMMISSION OUTPUT
Information requirement
Published statistics
Annual Report
Contact details
Feedback
Complaint
Response
Upheld complaint
Link should exist
2.8
HANDLE AUDIENCE FEEDBACK
276
Viewers & Listeners
Serious complaint
BCC / BSC
Request for tape
18
SCHEDULE & PROMOTE
Reports and statistics
Additional information
Additional info requirement
Duty to publicise contacts
Programme tape
Broadcasting Act 1990
Channel Controller
Production Body
22
MANAGE MATERIAL STORE & ARCHIVE

FIGURE 24

2.4. MANAGE RESEARCH STATISTICS
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Comment
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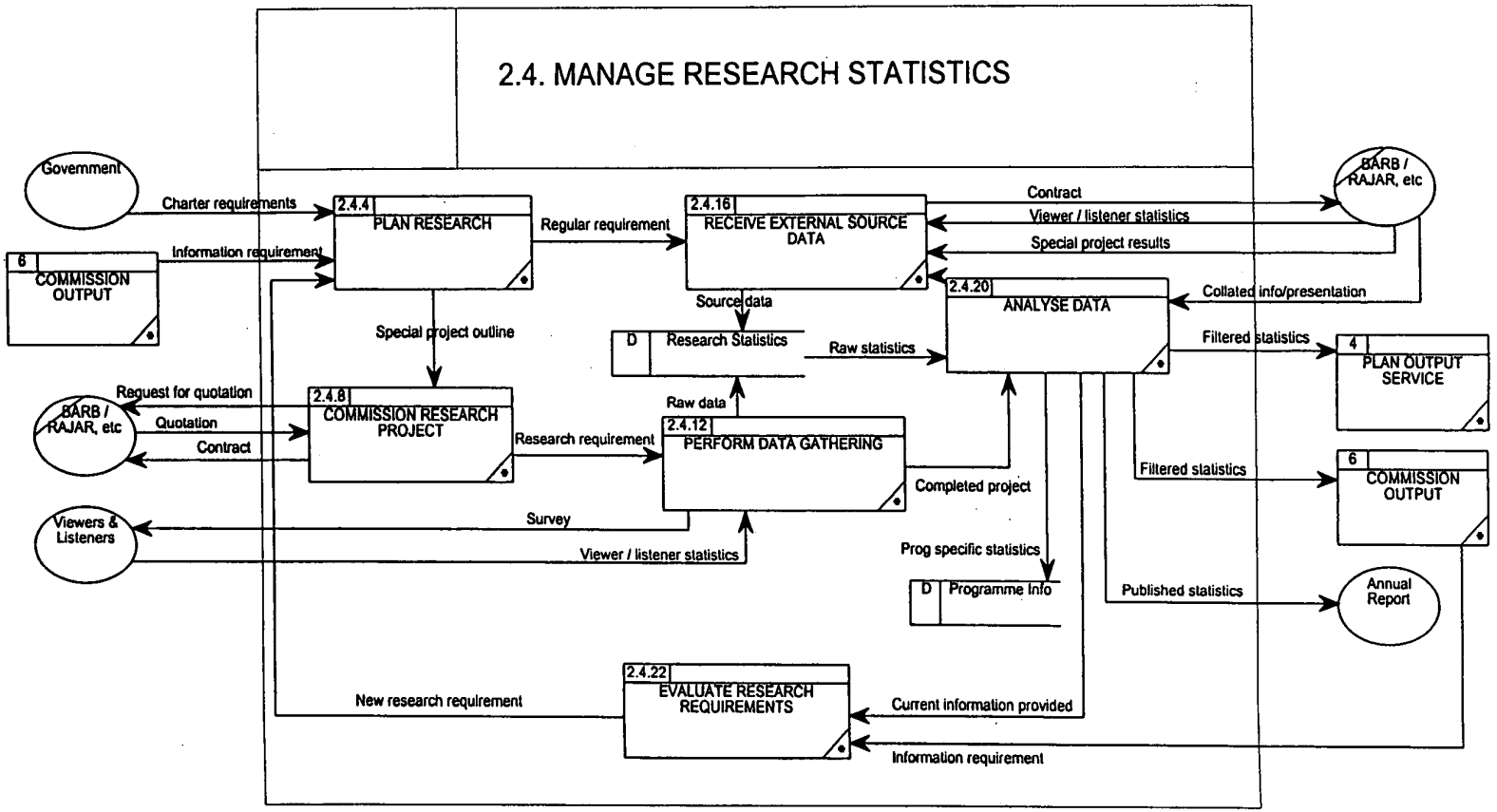

FIGURE 25

2.8. HANDLE AUDIENCE FEEDBACK
System Architect
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Comment

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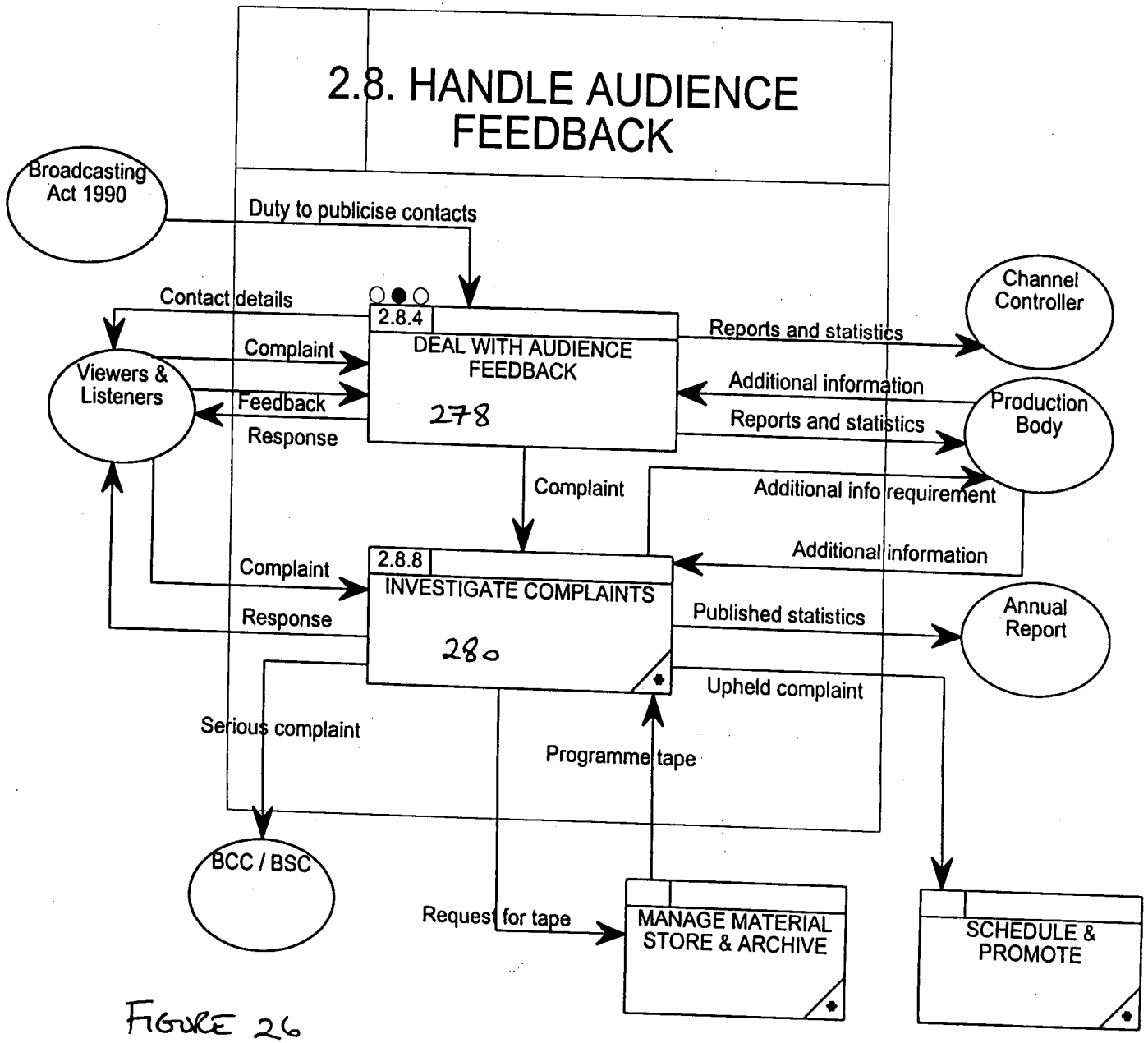

FIGURE 26

2.8.4. DEAL WITH AUDIENCE FEEDBACK
System Architect
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Comment

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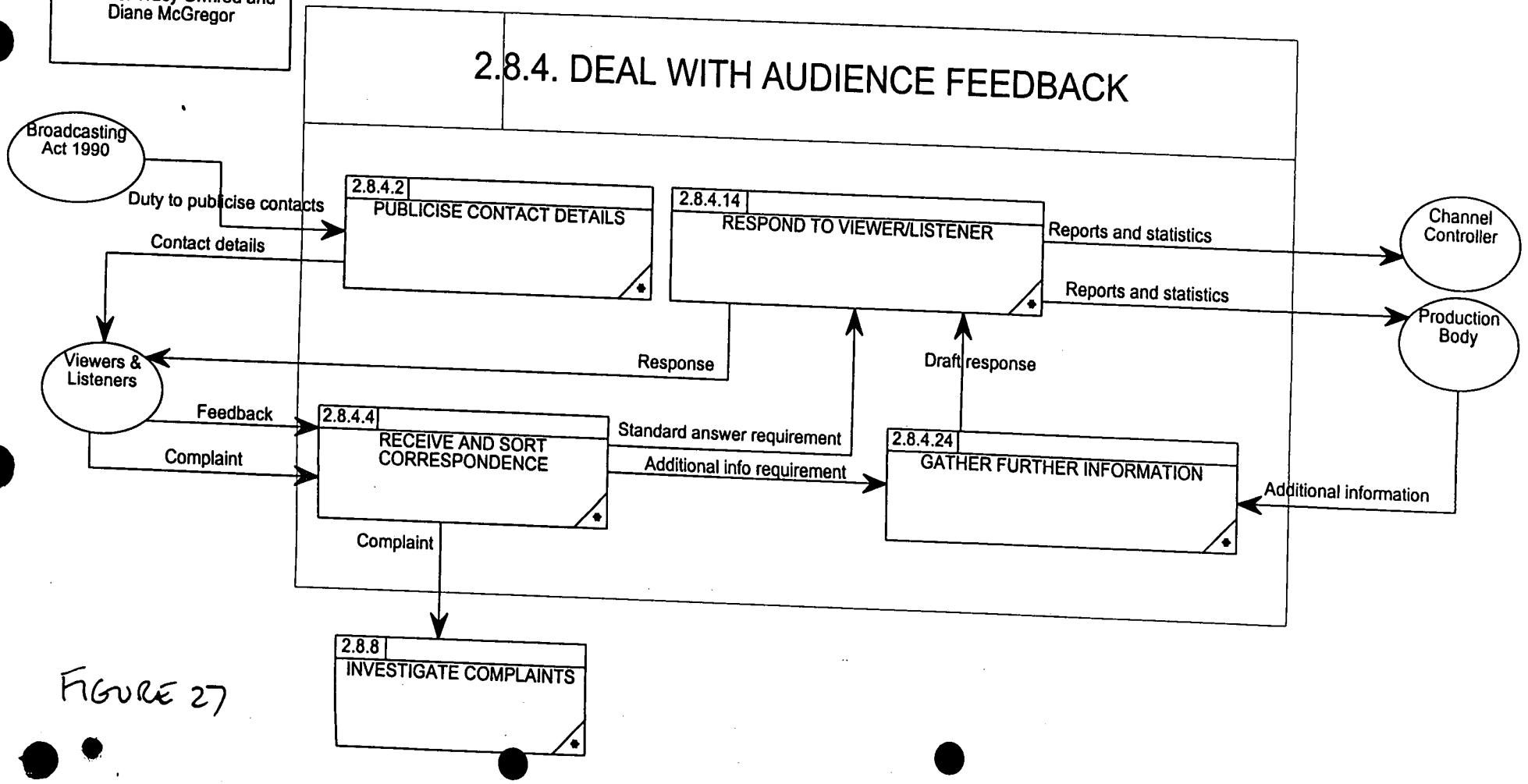

FIGURE 27

10. PROVIDE RESOURCES TO PROGRAMMES
System Architect
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Comment
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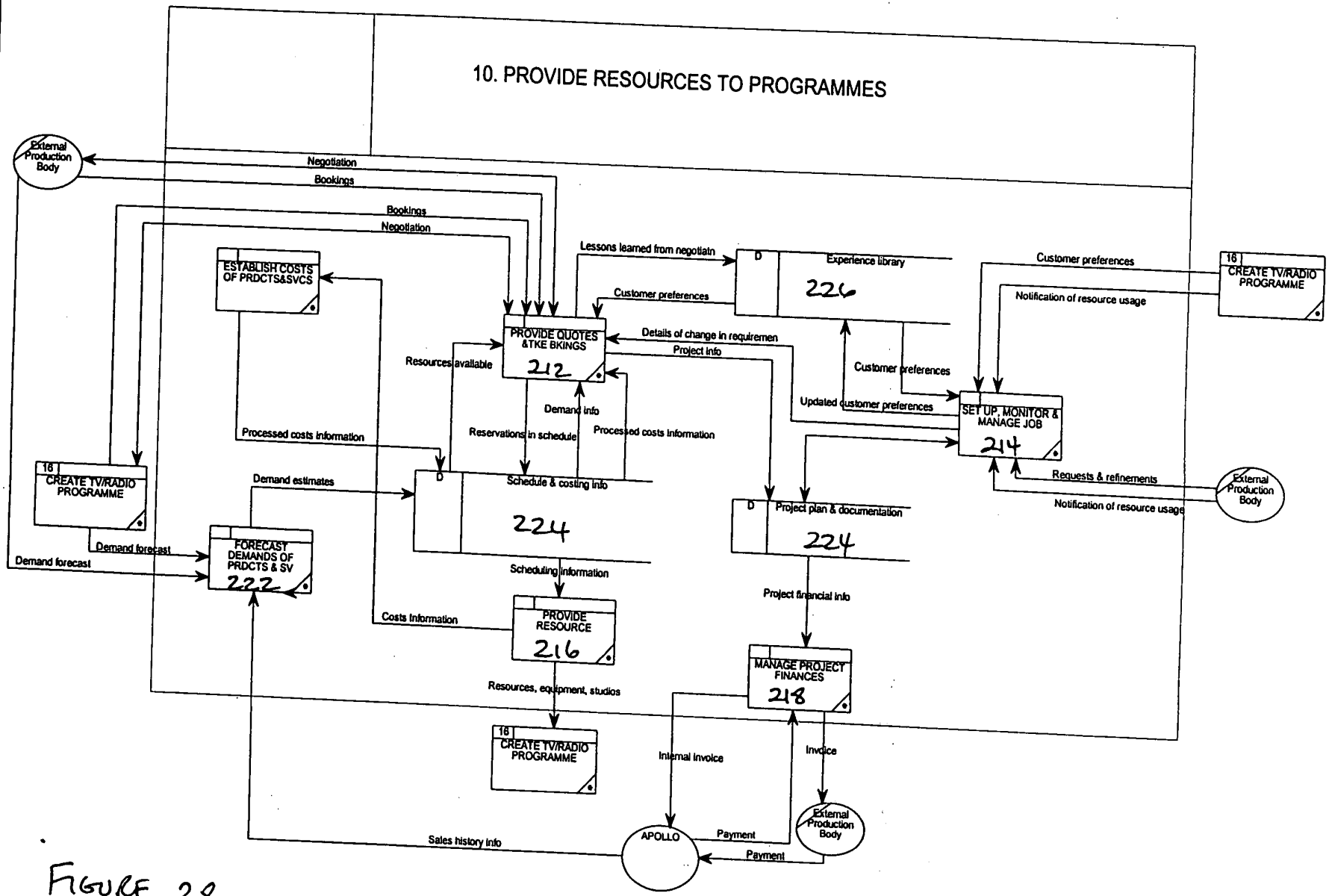

FIGURE 28

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